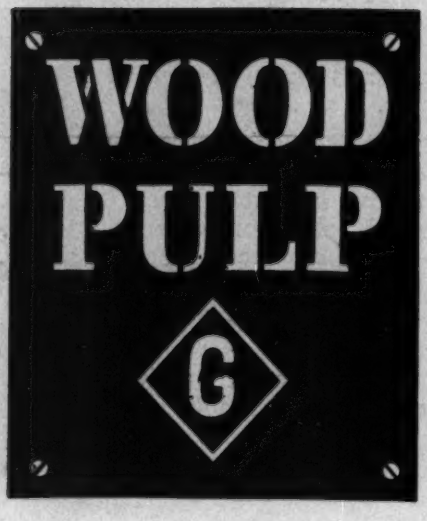
Paper

Feb. 23, 1931

74th Annual Review and Convention Number



Established 1886

"The time demands strong minds,
Great hearts, true faith and willing hands."
JOSIAH HOLLAND

Having emerged from what is probably the most eventful half-century in world history, America now enters the second half—with new problems and new responsibilities.

Throughout the United States, industrial activity is likely to be at highest levels ever recorded.

Pulp and Paper can look forward with full confidence to the establishment of new heights in growth and progress.

GOTTESMAN & COMPANY
— INCORPORATED —
100 PARK AVENUE • NEW YORK 17, N. Y.
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FIFTY YEARS OF PROGRESS

1901—1951

On the occasion of our Golden Anniversary, we extend to our many loyal friends in the paper industry our sincere appreciation of their patronage and confidence, which over the years have been the essential element in our success.

Clays have been a major factor in the improvement of printing papers and in the conservation of vital forest reserves. As America's largest producer of white china clays, Georgia Kaolin Company is proud to have contributed to the advancement of these objectives.

As we enter our second half century, we pledge anew to the paper industry our best efforts toward the further improvement of our products, with emphasis on continued research and technological development.

GEORGIA KAOLIN COMPANY

433 North Broad Street, Elizabeth 3, New Jersey

HOW'S THIS FOR Accessibility?

ONE MAN can perform all routine maintenance jobs on this brand new line of Allis-Chalmers large motors. He can remove the upper halves of the end brackets and air baffles and reach right inside the motor with his vacuum cleaner or air hose. There is plenty of room to reach up back of the stator core through air discharge openings in the stator yoke.

Bearings Protected

The capsule-type sleeve bearings need not be opened up and exposed when the end bracket halves are removed. The bearings are protected from abrasive dust and dirt while the motor is being cleaned. This eliminates the work usually required to dismantle the bearing, clean and reassemble it during routine maintenance.

Easy Installation

Large stator air discharge openings with removable louvers allow ample room to use an electric or air drill for doweling and bolting the motor to the foundation. These large discharge openings plus adequate air intake openings in the end bells provide cooling air at low velocities.

Sleek Appearance

You'll be proud of the appearance of the new Allis-Chalmers motor in your plant, too. Clean, simple lines and smooth contours give outward confirmation of its inner strength.

These new design Allis-Chalmers drip-proof and splash-proof bracket bearing squirrel-cage induction motors are built in sizes from 60 hp at 300 rpm to 1500 hp at 1800 rpm. Ask your Allis-Chalmers representative to show you the details of this exceptional new motor or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletin 05B7542. A-3251

ALLIS-CHALMERS

THE LONG-HAIR APPROACH IS OUT

We don't do it a certain way just because the book says so. Our engineers are strictly grass roots operators. These practical men spend much of their time in the field, busying themselves with whatever will cultivate the cabbage for paper manufacturers. Then, while they're bristling with ideas and red hot with enthusiasm, they translate their thinking into the machines of the future.

Moore & White definitely does not go serenely on manufacturing the tried-and-true nifties of a bygone era. We know from close, constant contact with the industry how increasingly complex are the production problems which crowd the paper-maker . . . how infinitely varied are the factors which put the snatch on his profits. From this experience, and the desire to serve, flows a steady stream of modern Moore & White equipment.

Several of these major components have just weathered exhaustive tests and will be made available to you promptly. When you see these newly designed machines, we think you'll say that Moore & White has indeed paced the trend and anticipated your needs to a remarkable degree.

If you have not had a Moore & White sales engineer look over your plant lately, put in a call for one. Tell him to take a crack at your present problems and forestall future trouble. It's his dish!

The MOORE & WHITE Company

18TH STREET AND LEHIGH AVENUE • PHILADELPHIA 32, PA.

CUSTOM-BUILT MACHINES FOR MAKERS OF PAPER AND PAPERBOARD

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Paper TRADE JOURNAL

Vol. 132 **FEBRUARY 23, 1951** **No. 8**

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NEXT WEEK

An Outline of the Progress made in Stream Improvement During 1950 is contained in a report of the National Council For Stream Improvement, Inc.

REMEMBER THESE DATES

FEBRUARY 26-28: American Management Assn.'s Personnel Conference, Palmer House, Chicago, Ill.

MARCH 6-7: Seventh National Marketing Conference, U. S. Chamber of Commerce, Hotel Fairmont, San Francisco, Calif.

MARCH 21: Commercial Chemical Development Ass'n Meeting at the Roosevelt Hotel, New York City.

APRIL 2-4: National Paper Trade Assn., Annual Convention, Waldorf Astoria, N. Y. C.

APRIL 17-20: American Management Assn., 20th Nat'l. Packaging Exposition, Auditorium, Atlantic City, N. J.

APRIL 30 - MAY 4: Materials Handling Conference; Held concurrently with Nat'l. Materials Handling Expo., International Amphitheatre, Chicago, Ill.

MAY 4-5: American Pulp & Paper Mill Supts. Ass'n, Northwestern Div., Spring Meeting, Radisson Hotel, Minneapolis, Minn.

MAY 7-11: Forest Products Research Society, Annual Meeting and Industry Show of 1951, Convention Hall, Philadelphia, Pa.

JUNE 24-28: Superintendents National Convention, Multnomah Hotel, Portland, Ore.

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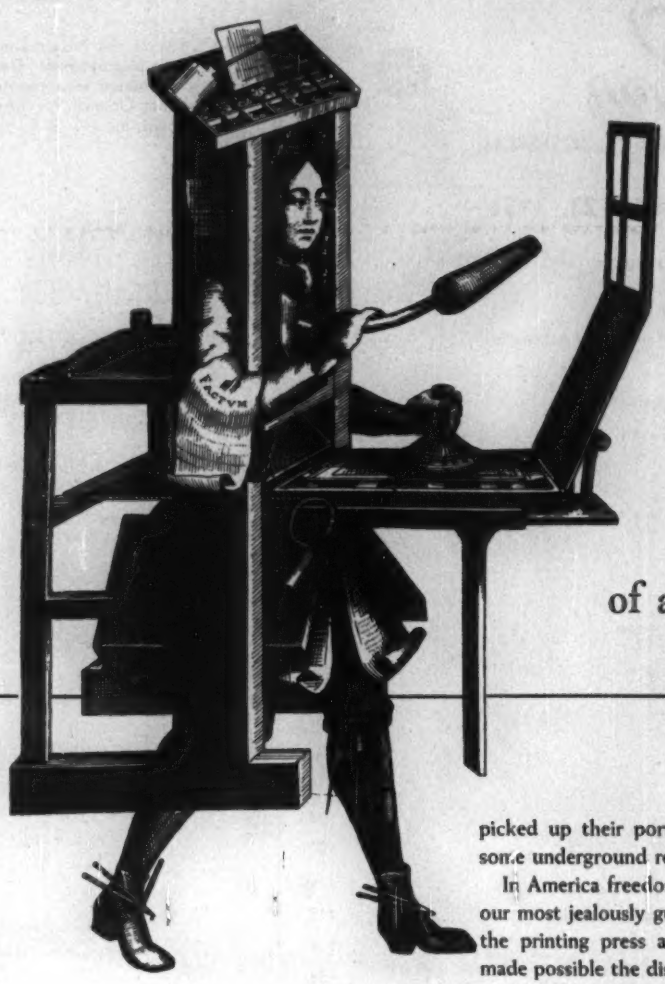
Illustration from the Bettmann Archive



Forerunner of a Free Press

Always the printing press has been an instrument for protest against tyranny, though often it has had to operate in secret. During the French Revolution, printers set up their mobile presses in streets and alleys and turned out pamphlets until, discovered by gendarmes, they picked up their portable plants and fled to some underground refuge.

In America freedom of the press is one of our most jealously guarded possessions. Here the printing press and plentiful paper have made possible the distribution of books, magazines and newspapers to all the people at little cost. Knowledge, culture and entertainment, spread without restriction, have helped to make and keep this a nation of free people with the highest standard of living in the world. Supplying this free press with its basic product—paper—is one of the great achievements of the American pulp and paper industry.

The dramatic story of paper is told in the sound-and-color film, "Paper—Pacemaker of Progress," and in a book under the same title. Both are presented by F. C. Huyck & Sons as a tribute to the Paper Industry. The book will be sent free upon request.

F. C. HUYCK & SONS • *Kenwood Mills* • RENSSELAER, N. Y.

5 REASONS WHY... FARREL® MAKES SO MANY CALENDER ROLLS

UNIQUE PLANT FACILITIES

Farrel has the facilities to cast, machine and grind calender rolls in sizes up to 72" diameter, 312" face. Paper mill executives know that, no matter how big or how special the job is, Farrel can handle it in the *world's largest specialty roll shop.*

LONG-LASTING ROLLS

In every Farrel roll the thickness of chill and gray iron body are combined in correct proportion to provide maximum service. The chill is sufficiently deep to resist crushing and abrasion; the gray iron body gives adequate strength to carry the load.

EXTREME ACCURACY OF ROLL

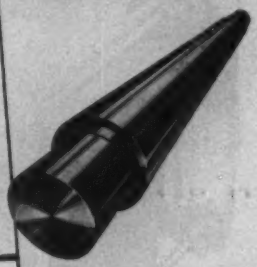
All rolls are produced to extremely close tolerances. Because of the hardness of the roll surface, this original accuracy is prolonged over a long period of time.

CORRECT CROWN

Crowned rolls are made with a precisely graduated crown, exactly symmetrical on both halves of the roll, as is shown in the exaggerated drawing at the left. This assures correct compensation for loading and weight of rolls in the stack.

RIGID INSPECTION

Before Farrel calender rolls can pass inspection they must be stacked and "light-tested." To pass this test the rolls must be ground practically to perfection, as a beam of light will disclose the most minute opening between the rolls.



Before you order calender rolls, send for a copy of the 16-page bulletin, "FARREL ROLLS FOR PAPER MILLS." This new bulletin explains how chilled iron rolls are made, and how the roll maker's experience, skill and plant facilities are reflected in the quality of the finished product.

Just ask for a copy of Bulletin No. 116. No cost or obligation.

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Plants: Ansonia and Derby, Conn., Buffalo, N. Y. Sales Offices: Ansonia, Buffalo, New York, Akron, Chicago, Los Angeles, Houston

Farrel-Birmingham®

FB-684

MURCO STAINLESS STEEL FLAT SCREEN

ALL PARTS IN CONTACT WITH PAPER STOCK ARE STAINLESS STEEL!

VAT BOX *may be tilted* **FOR RAPID CHANGE OF SCREEN PLATES AND WASHING OUT**

FOR use on either Fourdrinier or cylinder machines, this improved MURCO Stainless Steel Flat Screen is particularly adaptable for running different colors and grades of paper and boards—any operation where cleaning and preparing the screen for the next run demands no loss of time.

The upper part, or plate section of the vat can be removed in its entirety and replaced easily with a spare section instead of taking up the plates.

The corners are rounded, so they are free from anything which might cause hanging up of fibres.

An exclusive feature of the MURCO Stainless Steel Flat Screen is the non-tip diaphragm actuating mechanism. Diaphragms are designed to be easily removed without disturbing the other parts.

The efficiency and quiet operation of this screen in its entirety have proven surprising to mill men wherever installed. Another advantage is the absence of the necessity for painting—and its always neat appearance.

These features with high production, but low Hp requirements are reasons for you to investigate the MURCO Stainless Steel Flat Screen. . . .

ASK FOR DETAILS

Complete information is yours for the asking . . . write for it today.

MURCO

D. J. MURRAY MANUFACTURING CO.

MANUFACTURERS SINCE 1883 WAUSAU, WIS.

PRECISION PAPERS
of Practical Printability
and Impressiveness

NORTHWEST

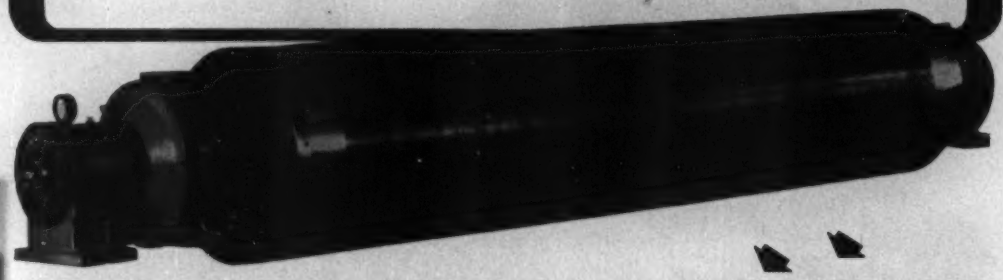
PEDIGREED PAPERS

ALWAYS MAKES GOOD PRINTING BETTER

THE NORTHWEST PAPER COMPANY · CLOQUET, MINNESOTA

YOU'LL SAY SO, TOO — WHEN YOU INSTALL

A MANCHESTER SUCTION DRUM ROLL



Schematic drawing of an actual application of a Manchester Suction Drum Roll on a board machine. Note how simple and economical it is to install.

CUTS COSTS • IMPROVES PAPER QUALITY
STEPS UP PROFITS • 7 PROVED WAYS

HERE'S WHAT YOU GET . . . .

1. Faster Drying Rate
2. Longer Felt Life
3. Uniformly High Paper Quality
4. More Re-Orders—Less Sales Cost
5. Increased Production
6. Cleaner Felts
7. More Profit Per Pound

Let us show you how we can make good for you on these 7 big advantages. Write today for complete information and quotation on your requirements.

THE MANCHESTER MACHINE COMPANY
1711 CENTRAL AVENUE • MIDDLETOWN, OHIO
SPECIALISTS IN PAPER MILL MACHINERY AND COMPLETE REPAIR SERVICE

...with new PLASKON AMINOPLAST WET-STRENGTHENING RESIN

Now—using Plaskon Aminoplast Wet-Strengthening Resin—you can give paper *higher wet strength for every dollar of resin cost.* Here are two comparisons which prove this—comparisons which you can verify at any time as many mills have already done.

Used in equal weight as any urea resin, Plaskon Aminoplast gives paper higher wet strength. To achieve the same degree of wet strength provided by urea resins, you can use from 5 to 30% less aminoplast, again at a saving!

While it costs *less* than melamines, Plaskon Aminoplast gives paper equal and *often better* wet strength. So your cost per degree of wet strength is substantially less with Plaskon Aminoplast. And other economies produced by the simpler and less costly procedures possible in using Plaskon Aminoplast can make your savings even greater!

To prove these savings to your complete satisfaction, an ample supply of Plaskon Aminoplast for a test run in your own mill will be furnished without charge. Let us send a representative to make the necessary arrangements *soon.*

PLASKON DIVISION • LIBBEY • OWENS • FORD GLASS CO.
Toledo 6, Ohio

Branch Offices: Atlanta, Ga. • Chicago, Ill., Lenoir, N. Carolina; Memphis, Tenn.; Milwaukee, Wis.; New York, N. Y.

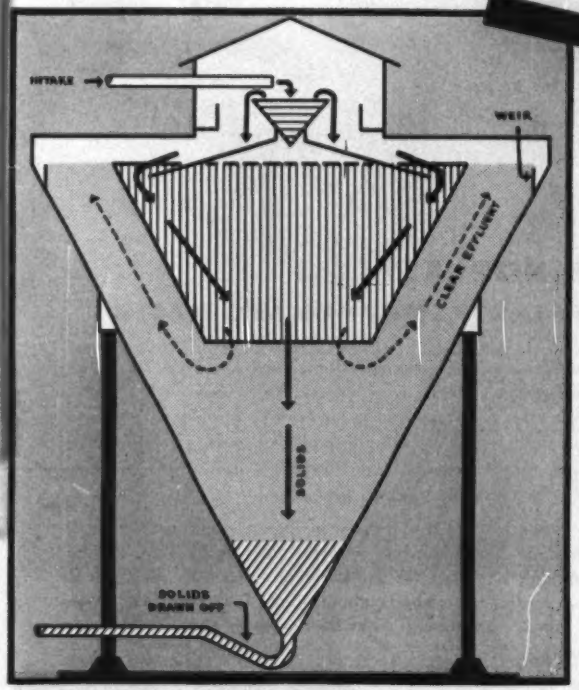
In Canada: Canadian Industries, Ltd., Montreal, P. Q.

World's largest manufacturer of urea resin glues
Also manufacturers of weatherproof boxboard adhesives, tub-sizing resins, abrasive binders, resin adhesives and ink-formulating resins

PLASKON.

TEXAS PAPERBOARD PLANT CHECKS THE ADVANTAGES OF THEIR MARX SAVEALL

- Each ton of solids recovered from waste water means an $18.00 saving.
- Water used in the process can be reused over and over again.
- All flotation scum is separated for easy disposal into the sewer.
- The Marx Saveall provides additional water storage capacity.



At the Dallas, Texas, plant of Fleming & Sons, a Marx Saveall proved 95 per cent efficient in recovering fiber carried over from the paperboard making operation in the white water effluent. The 3.3 lbs. of fiber per 1000 gals. that formerly had gone into the sewers is now recovered and transferred into new profits for this paperboard manufacturer.

The thorough, yet economical, process involved requires no chemicals or moving parts. The Marx Saveall consists primarily of two large cones made of plate steel, one mounted inside the other. White water from the paperboard machine is fed into the receiving well at the top of the unit. It then overflows on to a deaeration plate where air bubbles are shaken loose from the solid particles. Suspended fibers settle through the inside cone and collect at the bottom of the outside cone. The clear water rises between the two cones and flows over a circular weir into a draw off channel. The settled solids are drawn off through a pipe at the bottom of the outside cone.

For more information or quotations, write our nearest office.

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dryer felts

STRAIGHT & TRUE

Machine tenders like ASTEN Dryer Felts, because they run straight and true with less attention. After all, only the highest standards of excellence are to be expected from the *"World's Largest Producer of Dryer Felts."*

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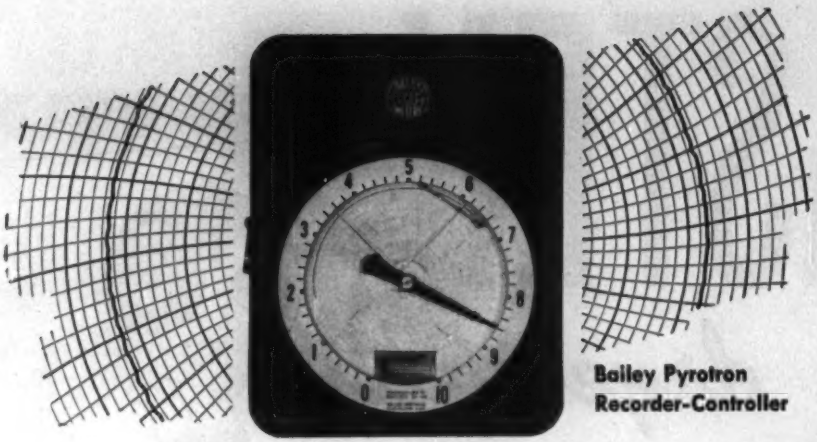


Bailey Pyrotron
Recorder-Controller

Looking for Better Temperature Instruments?

...Then check these features of Pyrotron Electronic Resistance Thermometers...

FUNDAMENTAL ACCURACY

Bailey Pyrotron Resistance Elements are made of highest purity platinum—the material used by the National Bureau of Standards in establishing basic standards for temperatures from −190°C to +660°C.

THREE TYPES OF CONTROL

Pyrotron Controllers may operate: on-off electrical systems by either electronic relays or electric contacts, modulated electronic systems, or air-operated systems. Two temperatures may be recorded on the same chart and controlled by a single instrument.

FACTS PUT INTO USABLE FORM

Bailey Pyrotrons may be arranged to put temperature facts into convenient usable forms. If two or more temperatures are related, they may be recorded as continuous records on the same chart for easy comparison. The average of several temperatures or the difference between two temperatures may be recorded as a single continuous record which may be retransmitted to a distant point or used to actuate a control system.

EASY INSTALLATION

Bailey Pyrotrons do not require careful leveling or protection against vibration. Three ordinary copper wires are all that is needed to connect each temperature sensitive element with the recorder. Power may be taken from any 115 volt 60 cycle circuit.

MINIMUM MAINTENANCE

The absence of galvanometers, batteries and standardizing equipment, together with the use of interchangeable unit assemblies, reduces Pyrotron maintenance to the vanishing point.

ABUNDANT POWER

A separate motor drive for each temperature furnishes abundant power to operate a recording pen, a controller and an alarm switch.

For the full story on this unusual electronic resistance thermometer which is suitable for ranges between −300°F and 1200°F, ask for Bulletin No. 230-C. P-21

BAILEY METER COMPANY

1056 IVANHOE ROAD • • • CLEVELAND 10, OHIO

Controls for Processing

TEMPERATURE
PRESSURE
% OXYGEN
% COMBUSTION
FLOW
LEVEL
DENSITY
RATIO

Two Steps TOWARD

PRE-LOGGING which harvest... trees for use before th... damaged by the big log h...

RE-LOGGING which sal-vages much useable wood after the big log harvest.

Pre-logging and re-logging are two Weyerhaeuser forestry practices that produce wood now useable in both the Weyerhaeuser sulphite and sulphate pulp mills. Logs as small as 4" in diameter and 8' in length are now handled by a recently developed small log hydraulic stream barker.

This means that the two sulphite pulp mills are producing pulp from logs of all sizes . . . the smaller ones supplied by pre-logging, which utilizes small trees that would otherwise be completely destroyed and wasted when larger trees are felled. The new sulphate pulp mill located adjacent to the lumber mill at Longview, produces its bleached kraft pulp from pre-logging operations, edgings and slabs from the Douglas Fir Saw-Mill . . . also from re-logging operations which follow the harvesting of the mature timber.

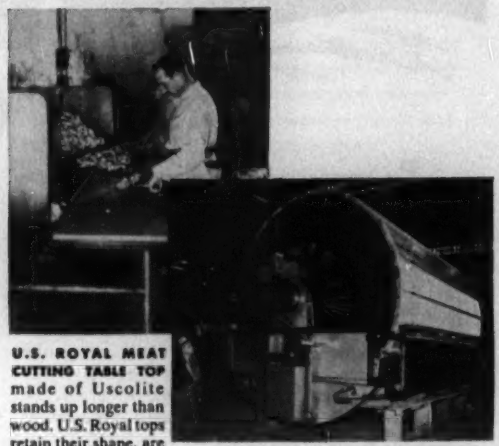
These advanced logging and whole crop utilization practices have made possible the economical operation of the Weyerhaeuser mills and greatly increased the pulp production from a given stand of timber.

PULP DIVISION

WEYERHAEUSER

What's U. S. Rubber doing with Plastic Pipe?

Giving it extremely high impact strength, for one thing. A single .44 cal. revolver bullet, fired at a distance of 20 yards, merely dented this piece of pipe, which is made of U.S. Rubber's new plastic, Uscolite. This amazingly strong, lightweight, versatile piping is easy to handle, won't break if dropped. Furnished in standard lengths, it can be cut to length and threaded on the job. Uscolite is resistant to most chemicals. For more information, write to address below. In Canada, write to the Dominion Rubber Company.



U.S. ROYAL MEAT CUTTING TABLE TOP made of Uscolite stands up longer than wood. U.S. Royal tops retain their shape, are easier to clean.

THIS CONKEY FILTER, part of the sanitation system of a midwestern city, is equipped with Uscolite piping. Uscolite handles corrosive acids, alkalies, salts.

PRODUCT OF

U.S. RUBBER

SERVING THROUGH SCIENCE

UNITED STATES RUBBER COMPANY

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DISTRIBUTORS OF WOOD PULP
BLEACHED AND UNBLEACHED
CHEMICAL AND MECHANICAL WOOD PULP

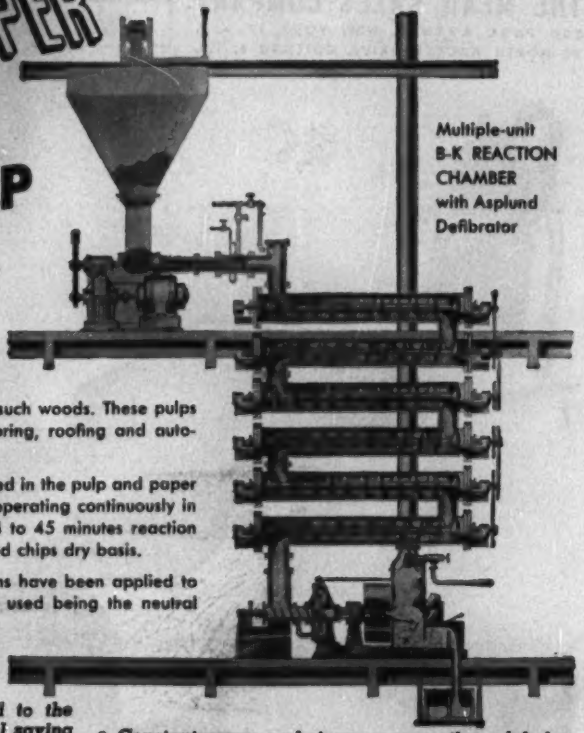
Paul Bunyan had the biggest grindstone in the world. When it turned around three times it was pay day again.

A reproduction of this incident from the fabulous life of Paul Bunyan—the fifty-sixth of a series—will be sent on request. It will contain no advertising.

CHEMIPULPER

(Patented and Patents Pending)

PRODUCES UNIFORM PULP at low cost . . .



Multiple-unit B-K REACTION CHAMBER with Asplund Defibrator

The Chemipulper produces, continuously, grades of pulp to meet specific requirements, using either hard or soft woods, or mixtures of such woods. These pulps are used for making .009 for corrugating; flooring, roofing and automotive felts, and insulating board.

More than fifty operating units have been installed in the pulp and paper industry . . . units built with from 2 to 8 tubes, operating continuously in 150 to 175 p.s.i. steam pressure range; from 4 to 45 minutes reaction time, and handling up to 100 tons a day of wood chips dry basis.

Several chemical agents of varied concentrations have been applied to the Chemipulper operation, the most generally used being the neutral sulphite and kraft cooking liquors.

Write for new Bulletin

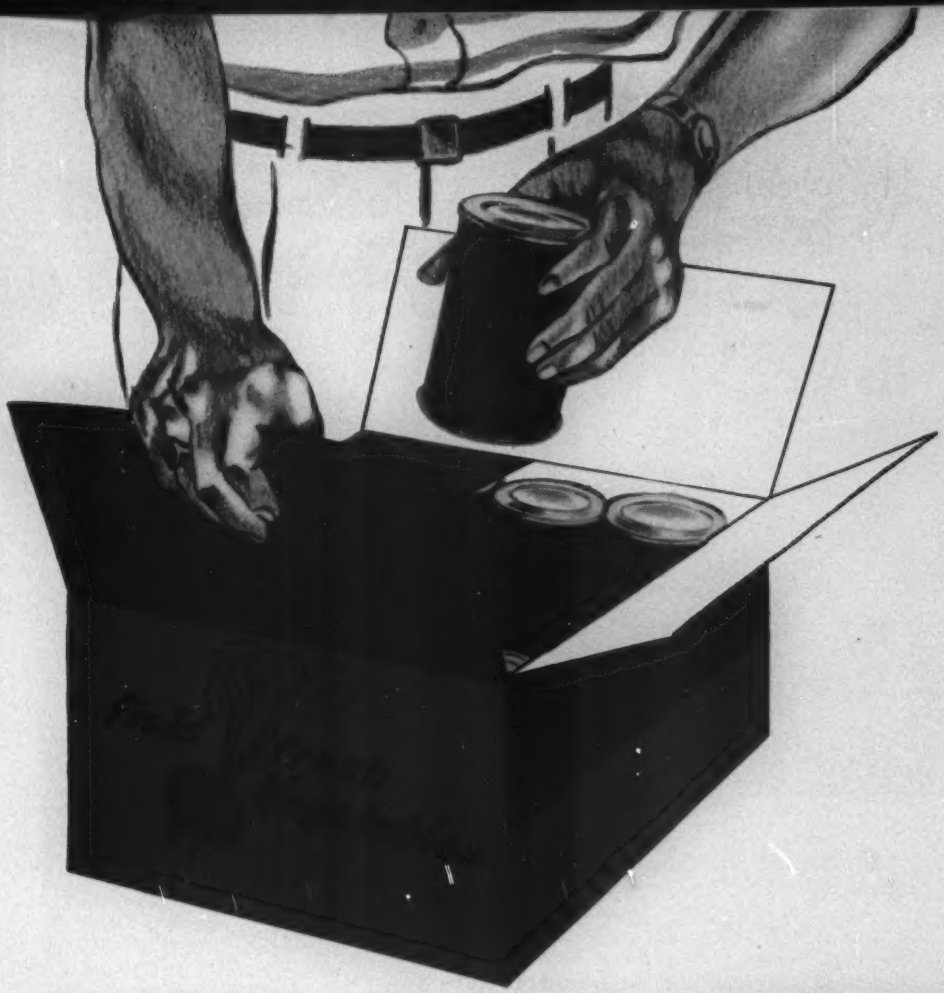
- *The Chemipulper operation as compared to the batch digester usually shows a substantial saving in steam, power and labor costs.*
- *Continuous operation of Chemipulper means less chip storage and conveying equipment . . . and less pulp storage capacity.*
- *Constant power and steam consumption minimizes peak loads.*
- *Chemipulper space requirements are less than the batch digester for equivalent production capacity, thereby reducing building costs.*

Flow drawing of the CHEMIPULPER with auxiliary equipment for producing semi-chemical pulps for Corrugating Board.

Flow drawing of the CHEMIPULPER with auxiliary equipment for producing semi-chemical Neutral Sulphite and Kraft Pulps.

PAPER and INDUSTRIAL APPLIANCES, INC.

122 EAST 42nd STREET ● NEW YORK 17, N. Y.



colored liner board GETS ATTENTION

3 color effects with 2 color printing
positive product identification on the shipping container

What helps your customer helps you!
Let National Technical Service provide
the formulas for distinctive shades.

National Aniline

They emphasize *production!*

"WHEN WE WERE PLANNING construction of our revolutionary new coating machine at Johnson City, N. Y., we asked for record-breaking capacity, and *reserve capacity*. We achieved both. We're producing and converting top-quality sensitized papers faster than ever before, and we still have plenty of capacity in reserve to meet new demands in expanding markets."

JAMES FORRESTAL, General Manager
OZALID, Division of GA&F Corporation
Johnson City, New York

The Camachine 14 at Ozalid is equipped with pneumatic constant web tension unwind, electronic side register control and pneumatic slitter units. Speed rated at 1800 f. p. m. Maximum rewound roll diameter is 38".

OZALID's giant paper sensitizing machine, largest and fastest in the world, is capable of coating and drying 249,000 feet of 79" web per eight-hour day. The 79" web is converted to standard width rolls on a Camachine Type 14 Slitter-Rewinder. Single shift operation of the Camachine handles the complete output of the coating machine, despite overtime scheduling of the coating operation. Camachine has substantially increased the Ozalid production potential over roll converting equipment formerly used.

Its reputation for dependable, trouble-free performance at record-breaking speeds has made Camachine the *one* outstanding name in roll production equipment. No matter what material you produce or convert in roll form, Camachine engineers will be pleased to consult with you regarding faster production and improved roll quality.

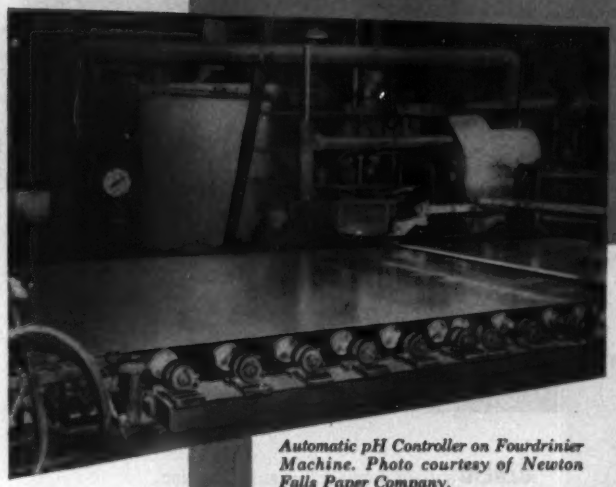
Cameron Machine Company • 61 Poplar St. • Brooklyn 2, N.Y.

They can depend on Camachine

BROWN INSTRUMENTATION IS THE MODERN APPROACH FOR PAPER INDUSTRY PROCESSES

Making GOOD Paper Better

...with the ElectroniK pH CONTROLLER



Automatic pH Controller on Fourdrinier Machine. Photo courtesy of Newton Falls Paper Company.

ElectroniK pH Controller offers this 3-way help for your plant.

1. *Stock going on machine.* Improves sizing and color uniformity, increases wire life.
2. *Bleach Plant.* Improves brightness and final sheet quality by assuring neutralization.
3. *Waste Disposal.* Guards against stream pollution.

PAPER MILLS have proven time and again that paper quality is affected by acidity or alkalinity of the stock. The degree to which this pH factor is controlled will reflect itself in sheet uniformity, printing surface, finish, permanency, retention and uniformity of color. Close control of pH also has a direct bearing on operating costs. The closer the control, the more economical the use of chemicals, the greater the life span of wire, and other paper machine parts.

The *ElectroniK* pH Controller, employing Beckman electrode assemblies, is another in the complete Brown line of instruments for the Paper Industry. It features high precision and sensitivity. In large and small mills, it is being used to control stock going on paper machines, to assure neutralization of bleaching chemicals, to guard against stream pollution in waste disposal . . . wherever measurement and control of acidity or alkalinity is a factor.

Call in your local Honeywell engineer for a detailed discussion of the economy of pH control . . . he is as near as your phone. Write for a copy of Data Sheet 2.9-45 which describes how continuous pH control improves sheet quality and lowers production costs.

MINNEAPOLIS-HONEYWELL REGULATOR CO., *Industrial Division*, 4510 Wayne Ave., Philadelphia 44, Pa. Offices in more than 80 principal cities of the United States, Canada and throughout the world.

MINNEAPOLIS Honeywell

BROWN INSTRUMENTS

APPLETON FELTS

DESIGN
FINISH
DEPENDABILITY
UNIFORMITY
SERVICE

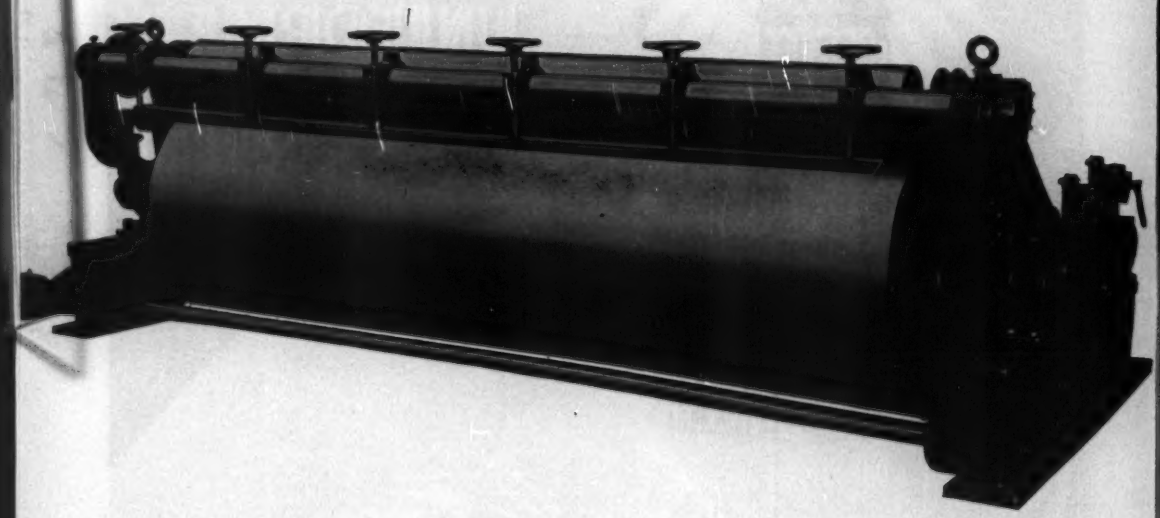
Appleton
WOOLEN MILLS
APPLETON WISCONSIN

The BAGLEY & SEWALL AIR OPERATED REEL...

This air-operated reel will give you a uniformly wound roll of paper from start to finish. Two small air valves control the operation of the reel shaft position, accurately regulating the pressure of the roll upon the drum. There's a positive uniform pressure at all times.

No hand wheels to be operated — just the turn of two small air valves. It's very simple. This new Bagley and Sewall reel has been designed for ease of operation and accurate performance.

When in need of a reel or any other paper mill equipment, write us. We'll gladly give you the benefit of our more than eighty years' experience in paper mill machinery manufacture.



BAGLEY & SEWALL

DESIGNERS AND BUILDERS OF PAPER MAKING MACHINERY

Finland Representative
Aktiebolaget Ekstroms Mekaniska
Helsingfors, Finland

WATERTOWN, NEW YORK

NEW YORK OFFICE: 500 Fifth Avenue, New York, N. Y.

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Castle and Overton, Inc.
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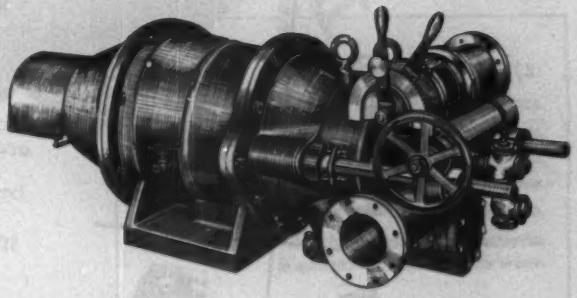
"we're ordering *More* MORDENS"

50% or better of the Morden "Stock-Makers" ordered during the last four years have been on repeat orders from old customers. Customers who have proved "Stock-Makers" superior performance in comparison with other equipment.

Nearly 500 "Stock-Makers" have been installed throughout the world during the last 15 years. Over 400 of these "Stock-Makers" have been installed during the last 4 years.

Such universal acceptance of "Stock-Maker" argues well for your investigation of the benefits to be gained from "Stock-Maker's" beating and refining.



PLAN TO ATTEND

MORDEN MACHINES COMPANY

PACIFIC BUILDING, PORTLAND 4, OREGON

In Europe: Millspaugh, Limited . . . . . Sheffield, England
In South America: Parsons & Whittemore, Inc. . . . New York City
In Canada: The William Kennedy & Sons, Ltd., Owen Sound, Ontario

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Craftsmanship

Tolerance Control

8 REASONS WHY SKF IS PREFERRED BY ALL INDUSTRY

Integrity

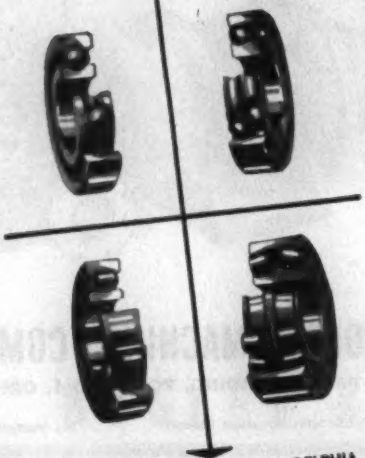
Product Uniformity

Field Service

Engineering Service

Surface Finish

make preference for a reason your guide when you specify ball and roller bearings



Over the years, products acquire a value above and beyond their mechanical qualities—a value proved by their *acceptance* throughout industry. This is especially true of SKF ball and roller bearings, preferred by all industry for one or more of eight good reasons. So when you specify, let preference be your guide. 7200

SKF
BALL AND ROLLER BEARINGS

SKF INDUSTRIES, INC., PHILADELPHIA 32, PA.
—manufacturers of SKF *and* HESS-BRIGHT *bearings.*

IF YOU HAVE A

stream pollution PROBLEM

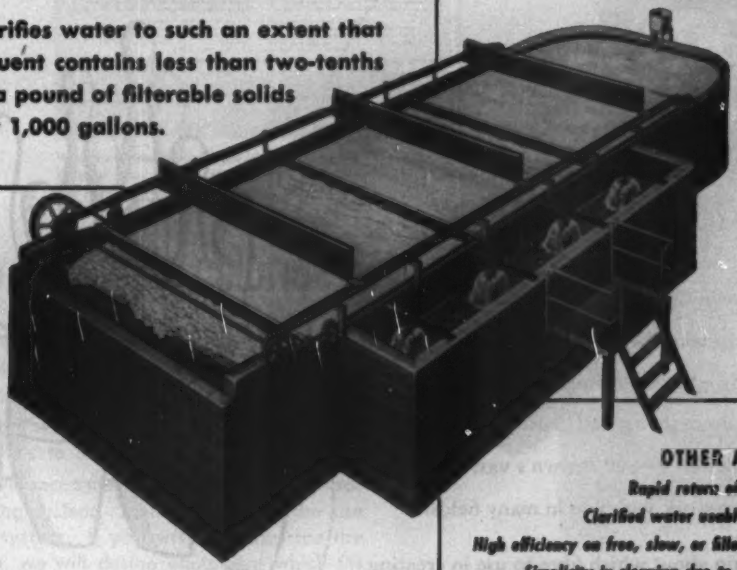
LOOK AT THESE BEFORE-AND-AFTER PICTURES

SVEEN PEDERSEN

FLOTATION

SAVEALL

Clarifies water to such an extent that effluent contains less than two-tenths of a pound of filterable solids per 1,000 gallons.



OTHER ADVANTAGES:

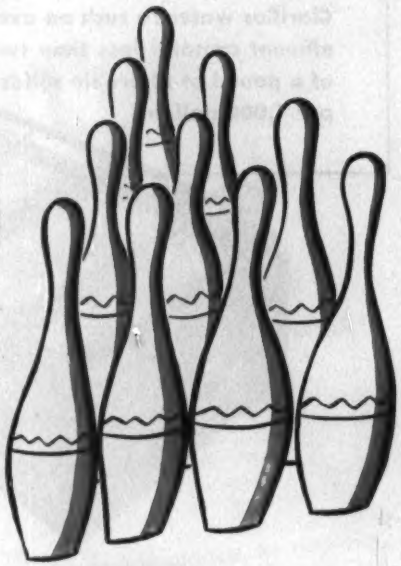
Rapid return of recovered fibers.
Clarified water usable in many places.
High efficiency on free, slow, or filled stock furnishes.
Simplicity in cleaning due to open construction.
Low maintenance costs—no screens, few moving parts.
Relative insensitivity to fluctuation in quantity of incoming white water.

Write for this FREE brochure

BULKLEY, DUNTON PULP CO., INC.
295 MADISON AVENUE, NEW YORK 17, N. Y.

In Canada: **ALEXANDER FLECK, LIMITED**
416 WELLINGTON STREET, OTTAWA, ONTARIO

An Expert can do the Job Better!



EXPERTS of Brown Company's Technical Service Division can help take the guesswork out of your new product planning—however unusual or difficult it may be. With more than a half century of wood fibre and research experience—and Brown's vast resources—they're ready to work with you in many fields.

Are you uncertain about which fibre to use in creating your new product? Why not let our technical staff help you find the *right* fibre?

A PRODUCT OF BROWN *Company*

Berlin, NEW HAMPSHIRE

GENERAL SALES OFFICES: 500 FIFTH AVENUE, NEW YORK 18, N. Y.

Branch Sales Offices: Portland, Me., Boston, Chicago, St. Louis, San Francisco, Montreal

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Wyandotte Chemicals Corporation will be glad to send you, without charge, this extensive instruction chart on the handling of chlorine.

How to handle chlorine

"Know-how" is essential to the safe and economical use of chlorine. If it's mishandled, it can be troublesome.

That's why Wyandotte's Technical Service is so valuable to our customers.

We will recommend handling equipment for unloading systems . . . instruct you in the use of the system. If you wish to vaporize the chlorine, we will design equipment which fits your requirements. We will recommend materials of construction . . . will submit a cost estimate in detail.

If you wish to improve your control, we will recommend suitable instrumentation. We will make periodic inspections of your equipment. We will instruct your personnel. These services are available to every Wyandotte customer . . . large or small. They can be available to you.

For details, write us at the address below.

WYANDOTTE CHEMICALS CORPORATION
WYANDOTTE, MICHIGAN • *OFFICES IN PRINCIPAL CITIES*

SODA ASH • CAUSTIC SODA • BICARBONATE OF SODA
CALCIUM CARBONATE • CALCIUM CHLORIDE • CHLORINE
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CARBOSE (Sodium CMC) • ETHYLENE DICHLORIDE • PROPYLENE
DICHLORIDE • AROMATIC SULFONIC ACID DERIVATIVES
OTHER ORGANIC AND INORGANIC CHEMICALS

Wyandotte
REG. U. S. PAT. OFF.

VALUE in a fine product reflects the experience and skills of its makers.

VALUE in Fourdrinier wires is a matter of record... paper quality and production records in mills throughout America reflect the fact that *Appleton Wires are Good Wires!*

APPLETON WIRE WORKS, INC.
APPLETON • WISCONSIN

RESEARCH KEEPS **B.F.Goodrich** FIRST IN RUBBER

Why grommet V belts last 20 to 50% longer

THIS drive works all day long, every day, furnishing power to a pulp beater that shreds the basic material for roofing. These B.F.Goodrich grommet V belts have been running constantly for two years without losing a single minute due to belt trouble. Why?

Twin grommets eliminate causes of belt failures — The B.F.Goodrich grommet is made by winding heavy cord on itself to form an endless loop. There are two of these grommets, placed close to the driving faces of the belt. They make up the load-carrying section. No fabric plies to stiffen and build up heat. Because most belt failures occur where cords overlap, this *endless* cord section in the grommet V belt eliminates this cause of belt failures.

Grommets work all the time — In an ordinary belt much of the cord strength is lost, wasted in the center of the belt where the cords don't pull their share of the load. But in the grommet belt, there are no center cords to loaf. The grommets do the work, stay at it all the time.

Grommet V belts last longer — Laboratory and field tests show grommet V belts last 20 to 50% longer. The twin grommet construction (U. S. Patent No. 2,233,294) is a result of the constant research going on at B.F. Goodrich. No other V belt is a grommet V belt. Now available in C, D and E sections.

A special demonstrator "X-ray" belt has been made to show the grommet construction. Ask your local BFG distributor to bring it around. *The B.F. Goodrich Company, Industrial and General Products Division, Akron, O.*

Grommet V Belts BY
B.F.Goodrich
RUBBER FOR INDUSTRY

Facts you should know about De Laval "CP" process pumps!

When service requirements change, you don't have to buy a whole new pump!

The De Laval CP pump can be quickly converted from closed to open impeller (or vice versa) by changing the pump volute and impeller only. This standardization also means you can keep your stock of spare parts to a minimum. Three sizes of shafts, shaft lock-nuts, bearings, bearing cartridges and pedestals *fit all nine sizes of De Laval CP pumps.*

Did you also know?...

that the external adjusting screw can be used to pull the impeller off the shaft? It is quick, easy and requires no special tools.

Shims and fussy fits are old fashioned...

When you have to compensate for wear between the impeller and case, it is only necessary to face off these parts, reassemble the pump and position the impeller with the external adjusting screw provided for that purpose. No shims required—no fussy fits.

DE LAVAL STEAM TURBINE CO., TRENTON 2, N. J.

TURBINES • HELICAL GEARS • CENTRIFUGAL BLOWERS AND COMPRESSORS
CENTRIFUGAL PUMPS • WORM GEAR SPEED REDUCERS • IMO OIL PUMPS

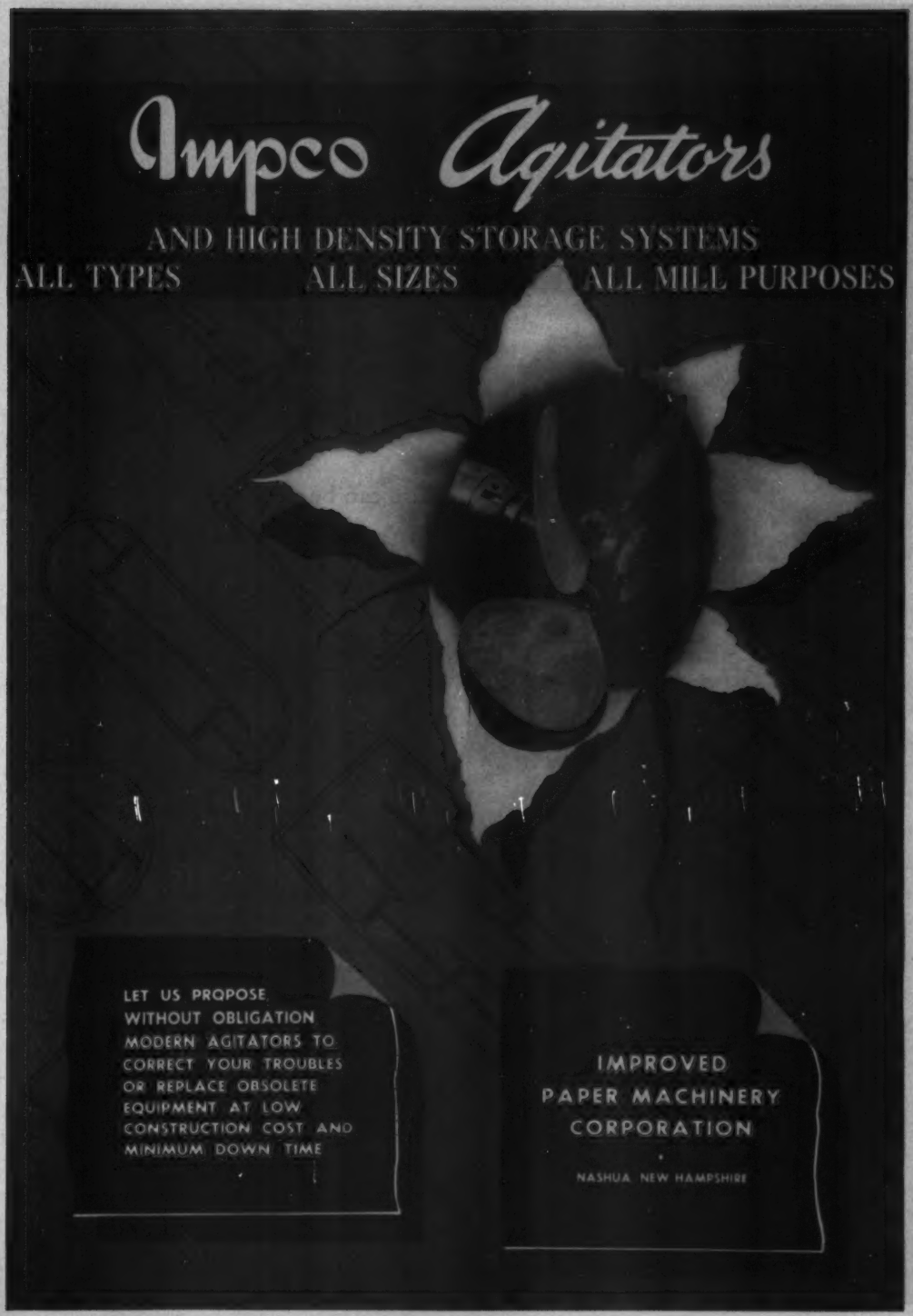
50th DE LAVAL Anniversary

CPP-5

Impco Agitators

AND HIGH DENSITY STORAGE SYSTEMS

ALL TYPES ALL SIZES ALL MILL PURPOSES



LET US PROPOSE
WITHOUT OBLIGATION
MODERN AGITATORS TO
CORRECT YOUR TROUBLES
OR REPLACE OBSOLETE
EQUIPMENT AT LOW
CONSTRUCTION COST AND
MINIMUM DOWN TIME

IMPROVED
PAPER MACHINERY
CORPORATION

NASHUA NEW HAMPSHIRE

Smooth
You can be sure of smooth running machines with
TENAX FELTS.
Tenax Felts, designed especially to suit your paper making machines, assure you of the best possible operation. They help you to produce your paper with efficiency and economy.
LOCKPORT FELT CO. · NEWFANE, N. Y.
TENAX FELTS

*Once you adopt NOPCO KFS**

Yes, when you rely upon Nopco's newly-developed KFS to improve processing and manufacturing conditions, it's the "end of the act" so far as foam is concerned... the end of the highly undesirable role it plays in pulp and paper mill. For Nopco KFS is an exceptionally efficient defoamer—able to eliminate obstinate foam conditions within a matter of minutes.

Stable to chemicals such as alum and chlorine, and to hard water, KFS provides extremely effective control at every stage in pulp and paper making where foam needs to be destroyed. For instance: KFS added to effluents from pulp mill and bleach plant cuts foam to negligible proportions—making disposal of waste liquors easy; added to stock in the paper mill, preceding any point where foaming occurs, it prevents foam development—thus assuring better fibre dispersal, reduced breaks, and improved sheet formation.

Nopco KFS is easily made into a stable emulsion by simply agitating with a paddle. Why not order enough for a trial run? You'll find KFS will do a real job of foam elimination, no matter how great the volume or speed of your production.

Send for free bulletin entitled "Nopco KF ° Series—Dispersing Agents for Improving Sheet Formation".

AN EFFECTIVE APPLICATION OF NOPCO KFS is seen in this battery of mist-type nozzles set up across the wire. A dilution of 1/10 of 1% KFS is sprayed through the nozzles onto the stock. This prevents foam formation on the wire, and reduces surface tension of water in the stock.

Result: No excessive volume of water falling back from the high speed dandy roll to disturb fibre formation, and no sticking of the sheet to the first bare roll.

*Reg. U. S. Pat. Off.

NOPCO

EVOLVED THRU RESEARCH

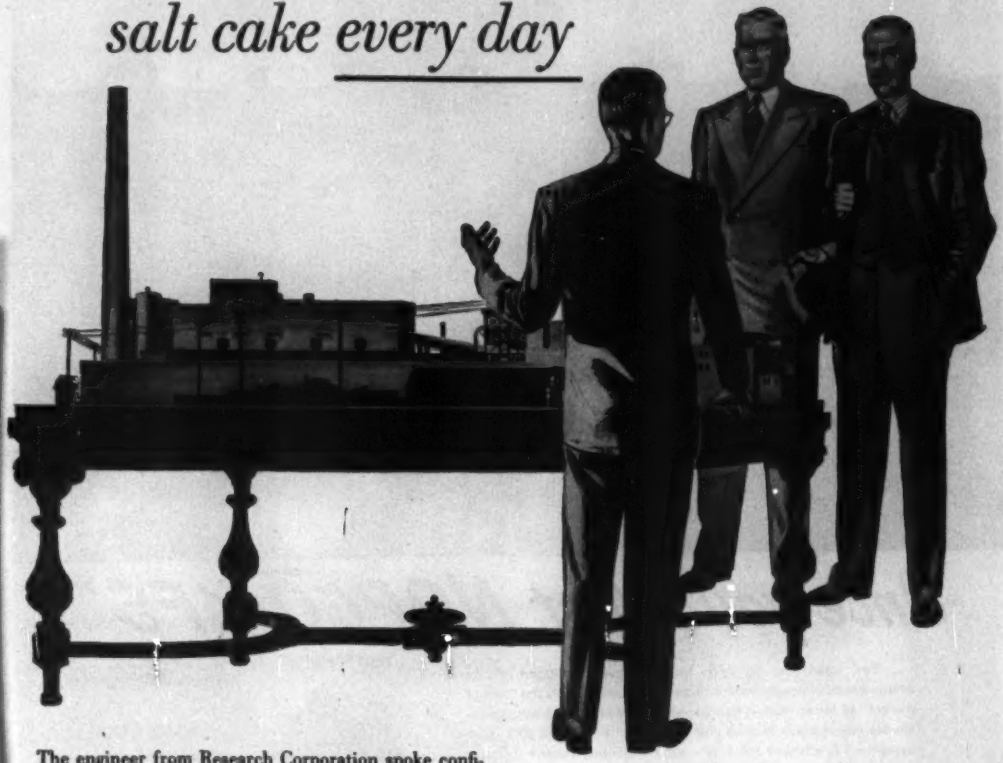
NOPCO CHEMICAL COMPANY

HARRISON, NEW JERSEY

Branches: Boston, Chicago, Cedartown, Ga., Richmond, Calif.

A RESEARCH CORPORATION COTTRELL

will save you $1000 to $1500 worth of salt cake every day



The engineer from Research Corporation spoke confidently. He had studied the equipment layout, and noted that the mill had a capacity of 1,000 tons of pulp per day. From his experience and specialized knowledge he knew that he could safely anticipate a minimum recovery of 100 pounds of salt cake for each ton of pulp produced—total: 50 tons of salt cake per day—value: $1,000.00 to $1,500.00 per day dependent upon salt cake cost prevailing at the plant.

Performance like this is the result of over 35 years of experience combined with careful engineering appraisal, attention to details and a remarkably efficient method. These, plus equipment which gives recoveries of 90 to 99%, are responsible for outstanding records of recovery.

If you are losing your chemicals through the stack in a soda or sulphate mill investigate the Research Corporation Precipitator.

RC-106

Research Corporation Installations

47 CARBON BLACK PLANTS
200 METALLURGICAL INSTALLATIONS
203 ACID PLANTS • 34 PAPER MILLS
262 DETARRING INSTALLATIONS
195 POWER STATIONS
71 STEEL PLANTS • 95 OIL REFINERIES
AND MISCELLANEOUS INSTALLATIONS

RESEARCH CORPORATION

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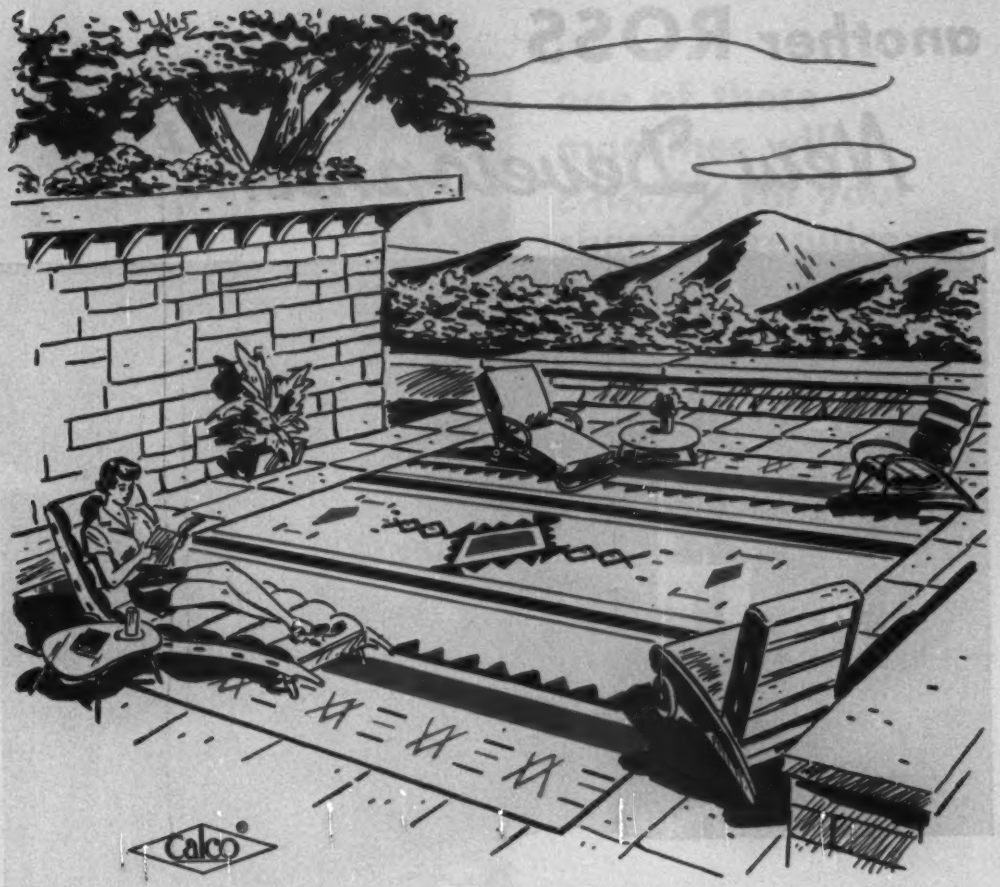


CALCOTONE* PIGMENT PASTES

Bright Shades - Rapid Dispersion - Fast to Light

Fast to Bleeding - Tinctorially Strong

A complete line of Calcotone Pigment Pastes is now available for the production of quality papers.

Calcotone Pigment Pastes are specifically recommended for beater dyeing because of their excellent dispersion. They are particularly suited for specialty papers such as twisting tissues for rugs and automobile seat covers, box covers, laundry tags and display papers where brilliancy, fastness to bleeding and light are specified.

Ask your Calco representative for our new Color Card showing the complete range of Calcotone colors. He will be glad to assist you with any special dyeing problem.

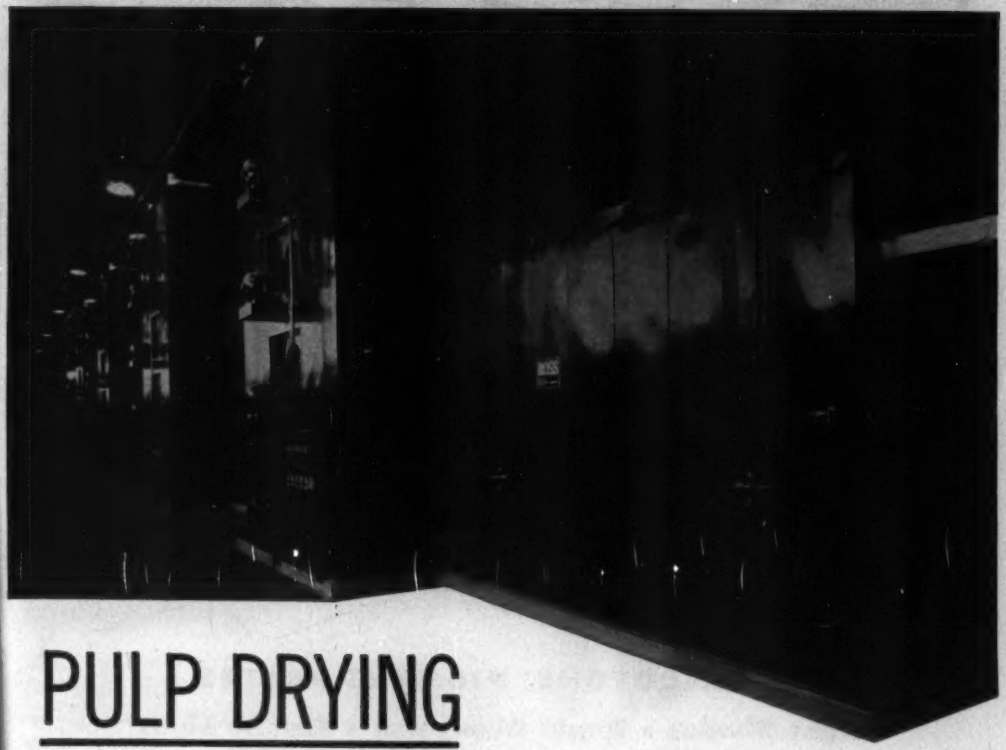
*Trademark

AMERICAN Cyanamid COMPANY

CALCO CHEMICAL DIVISION
DYESTUFF DEPARTMENT
BOUND BROOK, NEW JERSEY
New York · Chicago · Boston · Philadelphia · Charlotte · Providence

another ROSS

New Development



PULP DRYING

For many years the industry has hoped to overcome difficulties in pulp drying due to internal leakage, soilage, and high maintenance costs. These and other major problems have been solved with the recent introduction of the new ROSS Pulp Dryer. Drying pulp in a continuous operation with externally heated air is now possible—thanks to ROSS engineers—always striving for better methods of producing better products at higher speed and lower cost.

ROSS RS SYSTEMS

J. O. ROSS ENGINEERING CORPORATION

MANUFACTURERS OF AIR PROCESSING SYSTEMS

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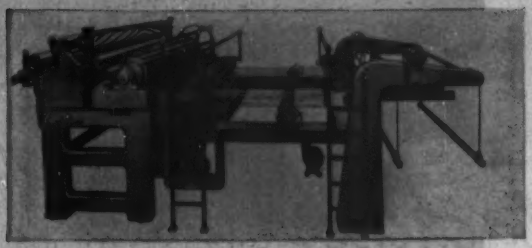
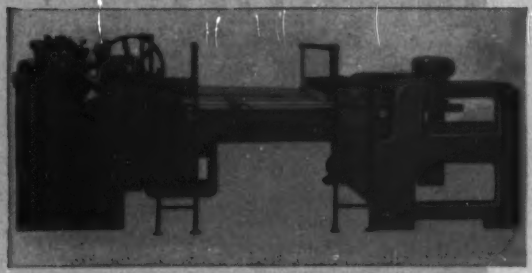
201 N. Wells Street, CHICAGO-6 • 79 Milk Street, BOSTON-9 • 9225 Grand River Avenue, DETROIT-4 • 600 St. Paul Avenue, LOS ANGELES-17
ROSS ENGINEERING OF CANADA, LIMITED, MONTREAL 32, CANADA • CARRIER-ROSS ENGINEERING COMPANY, LIMITED, LONDON, ENGLAND

one of these machines will *exactly* fill your sheeting requirements

Clark-Aiken Type H High-Speed Heavy-Duty Duplex Cutter-Layboy Unit for high-speed cutting of board, or pulp and multiple sheeting. 76" to 220", inclusive, with or without overlapping delivery. Furnished with conventional layboy as illustrated or overhanging type layboy shown below.



Clark-Aiken Type H High-Speed Heavy-Duty Simplex Cutter-Layboy Unit for heavy service. 76" to 220" inclusive. Conventional or overhanging type layboy (illustrated) for side removal of piles.



Clark-Aiken Type C Super-Speed Precision Cutter-Layboy Unit for extreme accuracy in sheeting rolls 76" to 124", inclusive. Conventional or overhanging type layboy, with or without overlapping delivery

Clark-Aiken Type D High-Speed Economy Cutter for finishing room service and for use of converters and printers. 36" to 100", inclusive, with or without overlapping delivery. Conventional or overhanging type layboy.

There is no all-purpose cutter — no one machine that will sheet all types of paper and board under all operating conditions with equal efficiency.

To bring sheeting efficiency in line with today's high costs, Clark-Aiken, pioneer in coordinated cutter-delivery-layboy unit design, is now first to offer a complete line—a cutter exactly suited to any specific operating conditions.

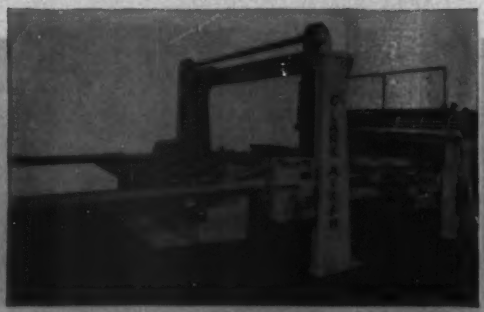
All of the machines shown here will cut paper efficiently; one will fit *exactly* into your cutting operations to give you highest sheeting efficiency and accuracy at lowest possible cost.

Clark-Aiken sales engineers will be pleased to help you make the proper selection. Write, wire or phone The Clark-Aiken Company, Lee, Massachusetts

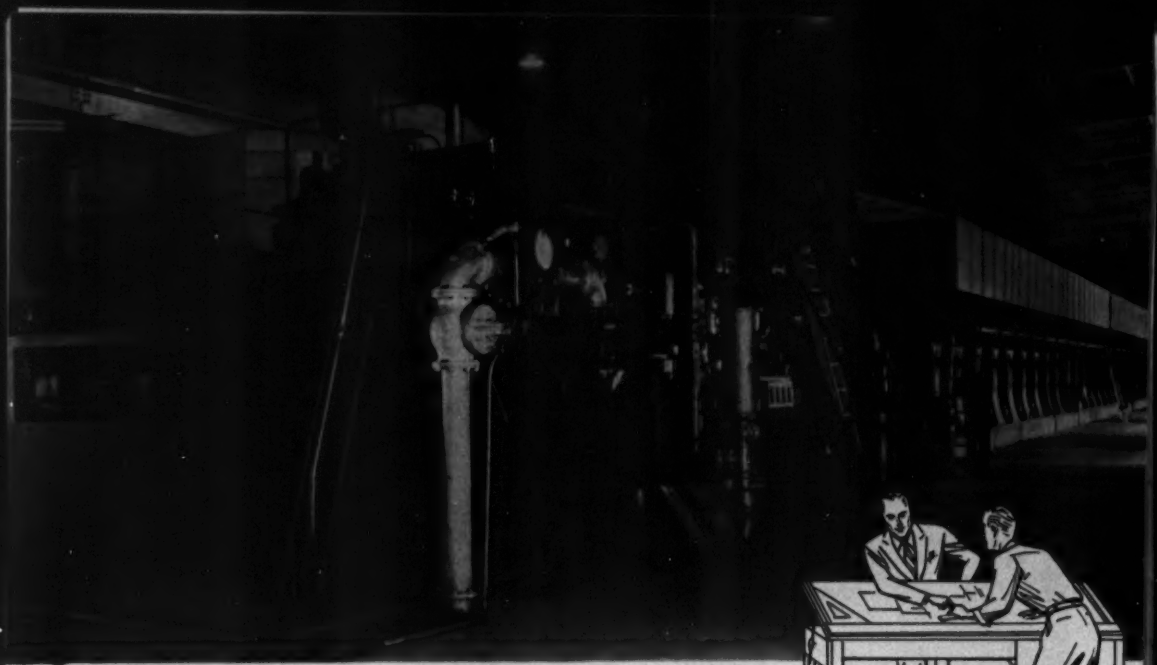
THE COMPLETE LINE

Clark-Aiken

CUTTER-LAYBOY UNITS



Clark-Aiken "Vickery" Layboy. Skids rest on floor and delivery rises as pile height increases. Piles may be removed from side or rear and delivery quickly drops to starting position greatly reducing cutter down-time. Available for all Clark-Aiken Cutters.



Puseyjones Cylinder Machine with a Stream-Flow Wet End—the most modern felt machine ever built.

Cylinder Machines
TAILORED TO YOUR NEEDS

If your 1951 plans call for a new Cylinder Machine or the rebuilding of an existing one, ask a Puseyjones engineer to show you this record:

Each *new* Puseyjones Cylinder Machine has broken former speed limitations *regardless of the product being made.*

Every Cylinder Machine *rebuilt* by Puseyjones, has reached and exceeded expectations—with better sheet quality, higher speed possibilities and furnish economies.

Outstanding Cylinder Machine improvements, like the Goldsmith Stream-Flow Vat System, are available on new or rebuilt machines. Machine change-overs are often accomplished in several steps—first, Stream-Flow Vat Systems with Flow Spreaders, later Vacuum Cylinder Molds, followed by Press improvements and added Dryer capacity.

Whatever your product may be—container board, folding boxboard, bristol and index, cylinder paper, felt, or special products—Puseyjones engineers will tailor the equipment to meet your needs. Write or call us today.

THE PUSEY AND JONES CORPORATION

Established 1848. Builders of Paper-Making Machinery

Fabricators and Welders of All Classes of Steel and Alloy Products

Wilmington 99, Delaware, U.S.A.

THE SIGN OF TRADE MARK REGISTERED QUALITY

You can't install a *better* valve than a

POWELL VALVE

—there IS no better!

Over a century of concentration on making one—and only one—kind of equipment must have a definite result. With Powell, the result is not only an amazingly complete* line of valves for industry but also the best valves it is possible to make.

*Powell Valves for the Paper Industry include not only a complete line of standard valves of all types but also special designs to meet the latest requirements of the modern paper mill.

Quality fine throughout the Line

Fig. 1893. A large 125-pound Alloy Steel Iron Gate Valve with special Corrosion-resisting trim. Designed especially for Sulphate Process services, monkeyless (long stem-rising) solutions pulp preparation and paper mill recovery.

POWELL

The WM. POWELL CO. 2525 Spring Grove Ave. P. O. Box 106, Station B, Cincinnati 22, Ohio

West Virginia Mill Brand Papers

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CONVERTING
POST CARD
COVER
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BOND
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WRITING
DRAWING
ENVELOPE
LITHOGRAPH
MACHINE COATED

SUPERCALENDERED
ROTOGRAVURE
MIMEOGRAPH
EGGSHELL
POSTER
LABEL
TAG
OFFSET
TABLET
COATED
GUMMING
FILE FOLDER
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Tyrone, Pennsylvania
Williamsburg, Pennsylvania
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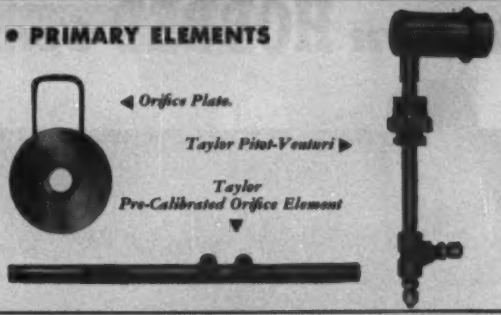
LET TAYLOR HANDLE YOUR FLOW PROBLEMS

• PRIMARY ELEMENTS



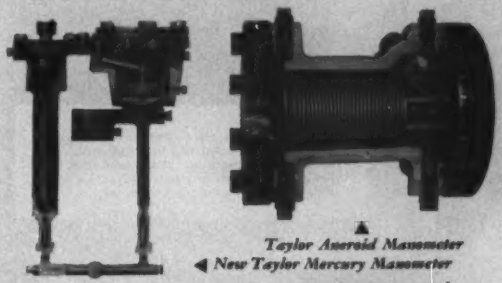
◀ *Orifice Plate.*

Taylor Pitot-Venturi ▶

Taylor Pre-Calibrated Orifice Element ▼

(1) Thin and thick type Orifice Plates from 2 to 24" in all standard materials. (2) Pre-Calibrated Orifice Assembly for high-accuracy with pipe sizes less than 2" are a "Specialty of the House" with Taylor. (3) The new and exclusive Taylor Pitot-Venturi Flow Element which produces greater differential with practically no pressure loss—7 to 10 times greater than by the conventional Pitot Tube. (4) Also standard Venturi Tubes. (5) Flow Nozzles from 3 to 14" in all standard materials.

• FOR MEASUREMENT

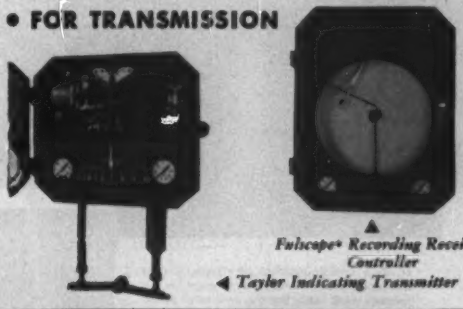


▲ *Taylor Aneroid Manometer*

◀ *New Taylor Mercury Manometer*

(1) New Taylor high-accuracy Mercury Manometer which features Teflon bearings, high energy output, submerged check valves, ½ of 1% accuracy, an adjustable leakless damping unit, and interchangeable range tubes for continuous ranges from 10 to 533 inches of water. (2) Taylor Aneroid (Mercury-less) Manometer, available in All-316 Stainless Steel or Cast Steel, accurately measures flow of hard-to-handle corrosive materials. No mercury to replace, no stuffing box. Sealing fluids or blow-back systems seldom needed. Long service. Easy cleaning. Easy range changes. Both Manometers available with Square Root Integrators.

• FOR TRANSMISSION



▲ *Fulscope* Recording Receiver Controller*

◀ *Taylor Indicating Transmitter*

Taylor Remote Transmission Systems accurately, quickly, economically, and safely transmit rate of flow to conveniently located point. Transmitters can be indicators, recorders or controllers. High accuracy—systems are calibrated to within ½ of 1% accuracy. High speed—only 2-second lag in 300 feet. Gives central control of widely distributed processes at one convenient point. Concentric dial transmitter with Mercury Manometer also available.

*Trade-Mark

• FOR CONTROL

▲ *Controller with internally mounted automatic-manual unit*

▲ *Fulscope Recording Pneumatic-Set Flow Controller*

Indicating or recording controllers in single or double duty form, with adjustable sensitivity or automatic reset. Ratio Flow Controllers with two Manometers attached. Control point may be adjusted by any other process variable. Pneumatic-set controllers whereby control point can be pneumatically adjusted from any remote location. Internally or externally mounted automatic to manual units.

• • •

For complete details, write for new Flow Catalog 98178, or ask your Taylor Field Engineer. He'll show you how Taylor Instrumentation can help you solve *any* flow problem. Taylor Instrument Companies, Rochester, N. Y., and Toronto, Canada.

Taylor's Centennial ACCURACY FIRST SINCE 1851

TAYLOR INSTRUMENTS MEAN ACCURACY FIRST

For ACCURATE Dryer Gears . . .
Specify Pacific-Western HOBBED Gears

A Pacific-Western gear expert is shown operating a precision hobbing machine which is generating the teeth of a dryer gear after it has been filled with laminated phenolic plastic segments bolted on to the gear center.

In the above photograph of a paper drying machine Pacific-Western dryer gears on the bottom mesh with the top row steel gears.

Pacific-Western dryer gears, driven by a precision-hobbed, hardened steel pinion, serve as initial drive units for two gear trains on paper drying machine.

EXPERIENCE has proven that high speed dryer gears must be of extreme accuracy to stand up under long periods of continuous paper drying machine operation without frequent breakdown and replacement. To insure such accuracy every Pacific-Western dryer gear filled with laminated phenolic plastic is hobbed—the best method for producing gears of this size and type.

Pioneered by Pacific-Western 27 years ago, these hobbed gears are more accurate in tooth spacing and tooth profile than gears made by indexing, or "single-cut", methods. A hobbed finish is superior to a finish resulting from a "single-cut" operation which leaves radial marks across the teeth.

With increased speed now being required of nearly all paper drying machines it is of interest to mill superintendents to know that Pacific-Western dryer gears are operating in many mills at a pitch line velocity of over 1600 feet per minute. Substantial savings in downtime as well as reductions in noise and vibration have been reported in numerous installations in U. S. and Canadian mills.

To provide fast customer service patterns are available at Pacific-Western plants for most standard paper machines. Call the plant or office nearest you for prompt quotation on new or replacement dryer gears for your mill.

4077

WESTERN GEAR WORKS

Manufacturers of PACIFIC-WESTERN Gear Products

Pacific Gear & Tool Works

Seattle · San Francisco · Los Angeles · Portland · Denver · Houston

Protection plus

for dryer roll bearings

GULF HARMONY OIL

Here are the three important reasons Gulf Harmony Oil so effectively protects dryer roll bearings against failure.

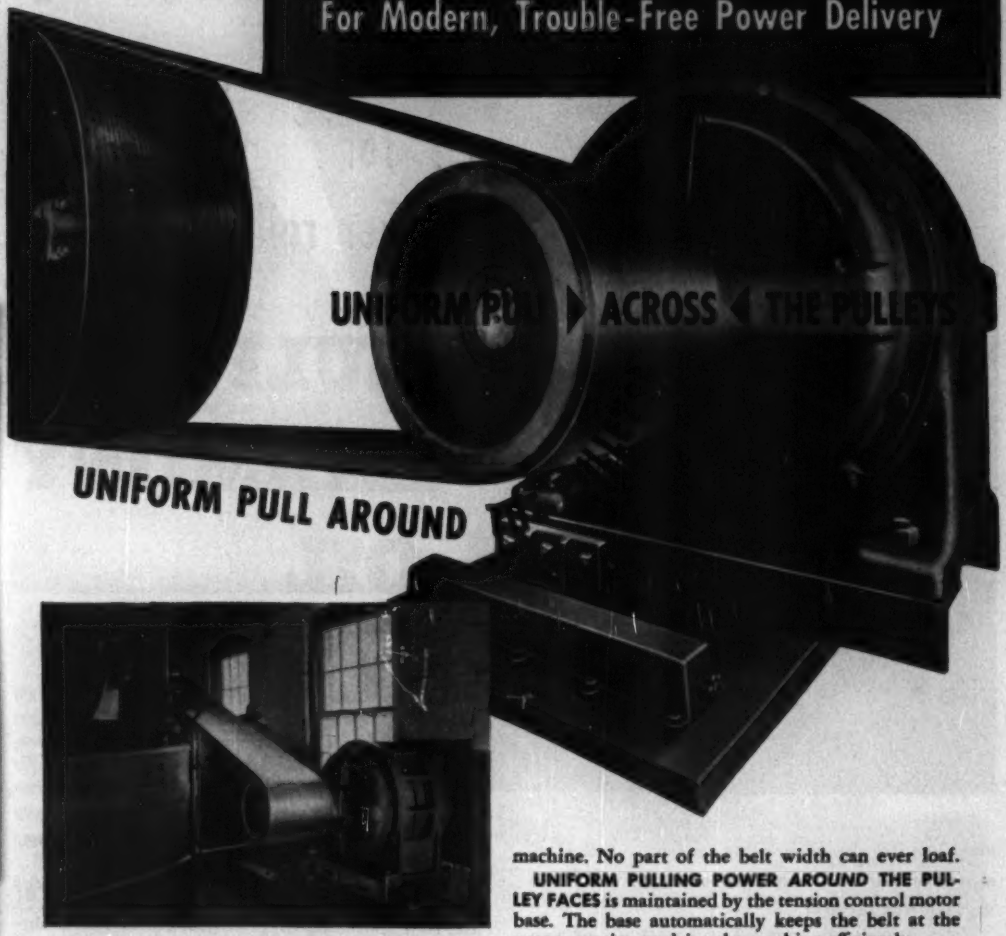
1. Gulf Harmony Oil has excellent oiliness characteristics—provides proper lubrication under severe operating conditions. Ideal for roller bearings subjected to high temperatures, and for sleeve-type bearings operating at low speeds and high temperatures.
2. Gulf Harmony Oil has been fortified to provide a safe, sure, rust preventive film. It's ideal for roller bearings in which moisture is a problem.
3. Because of outstanding resistance to oxidation, Gulf Harmony Oil keeps bearings and lubricating systems exceptionally clean. It prevents harmful deposits on bearing parts, keeps oil lines free.

For further information on Gulf Harmony Oil and for expert help on your lubrication and maintenance problems, call in a Gulf Lubrication Engineer today. Write, wire, or phone your nearest Gulf office. Gulf Oil Corporation · Gulf Refining Company, Gulf Building, Pittsburgh 30, Pennsylvania.

FIFTY YEARS OF SERVICE
1901 GULF 1951
PETROLEUM AND ITS PRODUCTS

IT'S THE NEW "UNI-PULL" DRIVE

For Modern, Trouble-Free Power Delivery



"Uni-Pull" is the latest in compact, individual drives. It has uniform pulling power both across and around the pulleys. This assures long, uninterrupted service with minimum maintenance.

YOU GET UNIFORM PULLING POWER *ACROSS* THE PULLEY FACES from the modern, flat leather belt. It pulls as a unit. No separate and uneven tensions. Just *one* belt; *one* pulley grip; *one* even tension across the pulley face, transferring power from motor to machine. No part of the belt width can ever loaf.

UNIFORM PULLING POWER *AROUND* THE PULLEY FACES is maintained by the tension control motor base. The base automatically keeps the belt at the proper tension to drive the machine efficiently.

High quality leather belting has a live, dynamic grip and pull that gives it a better service life on both short and long centers. Its long-lasting pulley grip means more power-carrying capacity at lower tensions. It has a natural ability, not found in substitute materials, to soak up shocks.

Ask your leather belting supplier for information on how to modernize the power transmission in your mill.

American* LEATHER BELTING *Association

Headquarters for Authentic Power Transmission Data

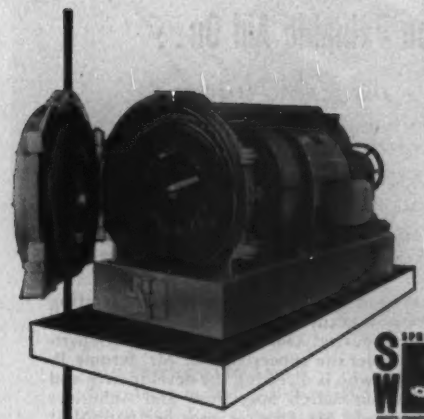
41 PARK ROW, NEW YORK 7, NEW YORK

AL-35

Mills that compare **Refiners** *choose* **Sprout-Waldron**

The MAIZEWOOD Installation

A battery of S/W Refiners and stock conveyors recently installed at the Maizewood Insulation Co., Dubuque, Iowa.



S/W Refiners do a wide variety of jobs—all of them thoroughly and economically. Here are some applications: refining kraft, soda, and sulphite knotter and fine screen rejects; hogged bull screen rejects; knotter and second screen rejects of raw ground wood; semi-chemical chips of all kinds; spent chips after extraction process; bagasse, straw, and similar grasses; breaking down lumps in reclaimed waste paper stock; reduction and refining of rag and other half stocks, etc., etc.

When all the pros and cons are weighed about pulp refiners, your choice will be Sprout-Waldron. Here is a high quality refiner that does more at less cost. A humdinger in any type of pulping, it far outperforms similar equipment in semi-chemical operations.

Its rugged construction, precision engineered, includes the unique peripheral control ring feature. This provides great flexibility of adjustment, enabling you to produce a wide variety of pulp characteristics. **With the Sprout-Waldron you can pinpoint exact pulp requirements.** Long-life plates are available in many styles . . . are easily changed and inexpensive.

Your initial investment in a S/W Refiner is comparatively low. High production rates, economy in power consumption, ease of operation, adjustment, and maintenance, mean additional savings.

Let a Sprout, Waldron representative explain how these refiners can step up your output and cut operating costs, or ask for Bulletin 41. Address Sprout, Waldron & Co., Inc., 59 Waldron Street, Muncy, Penna.

Sprout Waldron

Manufacturing Engineers

SINCE 1844

112

ESTABLISHED 1951

Morningstar

SCIENTIFIC DEXTRINE AND STARCH PRODUCT SERVICE

PRODUCTION AND SALES FACILITIES

The extensive, highly efficient facilities of the following plants and laboratories are at your service.

DEXTRINE AND STARCH PRODUCTS
MORNINGSTAR, NICOL, INC.
PLANT AT HAWTHORNE, N. J.

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SYNTHETIC RESIN AND RUBBER CEMENTS
PAPER MILL DEFOAMERS
FAISLEY PRODUCTS, INC.
PLANTS AT CHICAGO, ILL. and NEW YORK CITY
Sales Offices and representation in principal cities.

POTATO STARCH
AROOSTOOK POTATO PRODUCTS INC.
Houlton, Maine
MAGIC VALLEY PROCESSING CO.
Twin Falls, Idaho
NEW ENGLAND STARCH CO.
Houlton and Mars Hill, Maine

JEROME P. (JERRY) STRASSER

IF IT'S A DEXTRINE, STARCH OR ADHESIVE PROBLEM

"Put it up to MNI"

Let Our Paper Department Experts Give You Valuable Aid On..

1. TUB AND COATING STARCHES
2. TAPIOCA FLOURS
3. CONVERTED POTATO STARCHES
4. LAMINATING ADHESIVES
5. BAG PASTES
6. CORRUGATING STARCHES
7. MANNOGAL (Mannan-Galactan) PRODUCTS

Morningstar's modern laboratory and manufacturing facilities are now ready to give far more effective aid to the Paper Industry! Our enlarged Paper Department is now under the supervision of Mr. Jerome P. (Jerry) Strasser who is directing the development and application of our Starch Specialties and Adhesives for the paper trade. Mr. Strasser, together with MNI Laboratory and Technical Field Men can lend you highly effective and valuable aid on your Dextrine, Starch and Adhesive problems. Without obligation, write TODAY! Ask for suggestions, ideas, samples and cost estimates on your needs. Get all the advantages which only MNI's extensive experience and facilities can give.

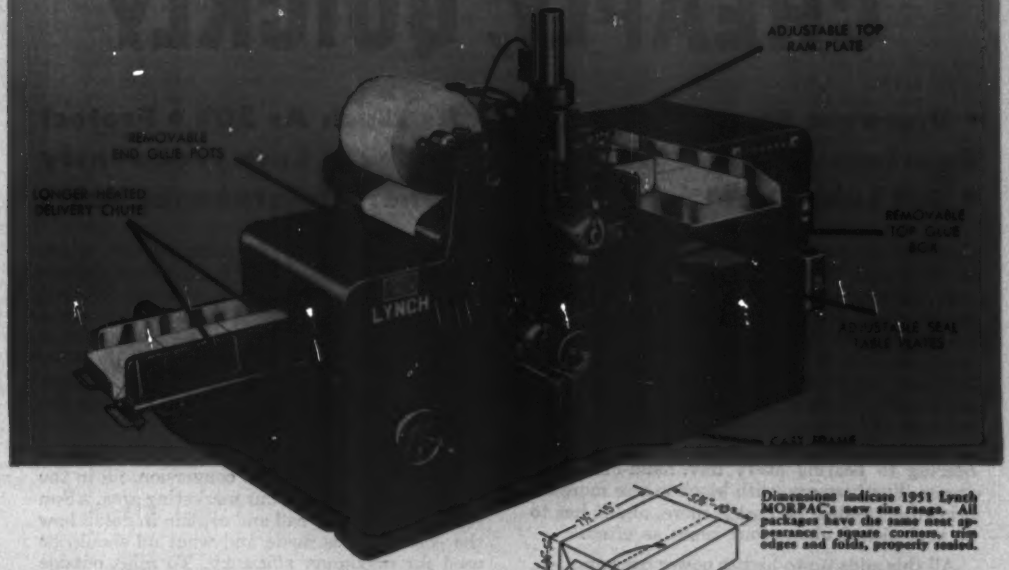
MORNINGSTAR, NICOL, INC.

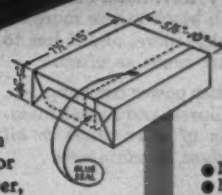
630 WEST 51st STREET
NEW YORK 19, NEW YORK

1770 CANALPORT AVENUE
CHICAGO 16, ILLINOIS

New Package Sizes... New Features with

THE ALL-NEW 1951 MODEL E LYNCH MORPAC PAPER PACKAGING MACHINE





Dimensions indicate 1951 Lynch MORPAC's new size range. All packages have the same neat appearance — square corners, trim edges and folds, properly sealed.

Just developed by Lynch Engineers is the "All-New 1951 Model E Lynch MORPAC Paper Packaging Machine". It wraps or bands and seals with liquid adhesive ream paper, pads, tablets, loose leaf fillers, bound books, etc., at speeds up to 1,000 units per hour, saving 30% to 40% in wrapper material. Electrically controlled and air operated, it requires only one operator for feeding. On an average operation, it pays for itself in a surprisingly short time. Write for details on how Lynch MORPAC Model E can reduce your packaging costs.

FEATURES:

- New removable glue pots
- New adjustable seal table plates
- New additional heat sealing
- New simplified adjustment settings
- New complete accessibility
- New cast frame
- New electrical and mechanical refinements throughout
- New size range: Min. 5 ¼ x 7 ½ x ¼"; Max. 10 x 15 x 5"
- 15 minute max. time for size change

PAR AIR COMPRESSORS

PAR REFRIGERATION COMPRESSORS

WRAP-O-MATIC CANDY & COOKIE WRAPPING MACHINES

LYNCH CORPORATION

PACKAGING MACHINE DIVISION
TOLEDO, OHIO

MORPAC PAPER PACKAGING MACHINES

MORPAC BUTTER & OLEO CARTONING MACHINES

GLASS FORMING MACHINES

CONVERT DRIER ROLL BEARINGS FROM BLOCK GREASE TO OIL CHEAPLY, QUICKLY

• Decrease Power Consumption As Much As 20% • Protect Bearings Better • Replenish Lubricant Less Frequently • Cut Lubricant Costs • Reduce Other Maintenance Costs

Drier roll bearings in all modern paper mills are oil-lubricated. Here's why. At best, block grease provides only boundary lubrication. And a block grease which feeds in the right amount where operation is at one temperature, will feed too much on drier bearings running hotter, and too little on those running cooler. In addition, at higher temperatures block grease tends to char and lose its lubricating effectiveness. As a result, in many mills maintenance men have to go from bearing to bearing every day, hand-oiling the grease. Furthermore, with block grease more lubricant is needed, its cost is more, and it has to be replenished about four times as often.

All this adds up to higher power consumption, more frequent bearing failures, and higher maintenance costs. *Conversion of older driers to oil lubrication overcomes all these disadvantages.*

HOW TO DO IT. A simple mechanical device, which can be made in your own maintenance department or any local metal shop, converts drier roll bearings from block grease to oil in a matter of hours. The cost generally runs well under $5 per bearing, and the installations can be made by your own maintenance crew. The savings in time, money and performance will quickly repay the small cost of conversion.

FOR A FREE FOLDER, with photographs and diagrams showing how to make the conversion, fill in the coupon below. Within our marketing area, a Sun representative will call and explain in detail how the conversion is made and what oil should be used for maximum efficiency. To mills outside our marketing area we will be glad to mail the folder as a small contribution to the nation's urgent need for greater paper output.

SUN INDUSTRIAL PRODUCTS

SUNOCO

SUN OIL COMPANY, PHILADELPHIA 3, PA.

SUN OIL COMPANY, LTD., TORONTO AND MONTREAL

Sun Oil Company
Dept. PT-2
Philadelphia 3, Pa.

Please let me have a copy of your folder describing how to convert drier roll bearings from block grease to oil.

Name_____

Title_____

Company_____

Street_____

City_____ Zone_____ State_____

Paper TRADE JOURNAL

TRENDS

Office of the PAPER TRADE JOURNAL,
Wednesday, February 21, 1951.

Plans for the first year of a new era occupy the attention of Industry executives meeting in New York this week—an era which may last 10 years, a generation or a lifetime; an era which may well see the birth of a United States of Europe and the evolution of a world of federated states.

Major problems under discussion are those of raw materials supply and distribution of the finished product, with a minimum of disturbance to our economic balance.

Currently, the powerhouse of supply is the North American continent, though a reconstructed Europe rapidly is getting back into production stride.

European Recovery Factor

Two conditions relating to European recovery are not always considered by U. S. consumers, particularly as they relate to raw materials supply. More and more of the Scandinavian wood pulps is needed by these European mills, a supply already limited by woods supply. Then again, the standards of living are rising all over Europe, and will, through U. S. enterprise and beneficience take increasingly sharp gains, with parallel increases in paper needs—newsprint, book papers, household and packaging papers, etc.

Of paramount consideration in the Industry's program must be the tremendous paper and board needs of the armed services of Atlantic Pact nations.

Wood Pulp Supply

It has been proven on paper that the overall world woodpulp supply is adequate to current demands.

Report of the Preparatory Conference of World Pulp Problems, Montreal, June, 1949, is often referred to on this point. The Conference report estimated "approximate equilibrium between world production and requirements for 1948 to 1955," though it also recognized that significant changes in world distribution were in the making.

"If these figures are confirmed by subsequent developments," the report of the Food and Agriculture Organization read, "there should be no major woodpulp surplus or deficit during the period under review."

Obviously an unrelated and unqualified quote is unfair. There is a school of thought however which holds to a similar viewpoint: that the overall world picture of wood pulp supply is one of adequacy.

Unfortunately for the vast demands of the Defense Program, the woodpulp supply is not all distributed where it is needed and by whom it is wanted—conditions which determine a seller's market. Worldwide demand expands, and supply is not abreast of consumer demand.

Price consideration alone would have diverted much of the Scandinavian supply from U. S. mills to other markets long before this time. Overseas producers however do want to keep a hold in the U. S. market, if possible. But, as has been said many times, consuming mills stand to lose these much-needed supplies unless the OPS makes provision in the price order for possible price changes in Scandinavian imports, as well as Canadian.

Production Needs Expand

Expanded demand of paper mills is not alone responsible for the inadequacy of pulp supply.

Emphasized in the New York market is the tremendous gain in demand for dissolving pulps for rayon production. Involved are heavy requirements for the armed services, world wool shortage for which rayon textiles are substituting, and growing favor of rayon fabrics through promotion programs.

Long-range plans of American mills include developments in northern Canada and southern U. S. to open up new areas of supply for market-pulp consumers. Canadian expansion in New Brunswick holds the promise of some 2,000 tons of bleached sulfite monthly by the end of 1951, and 7,500 tons of bleached kraft monthly, late in 1952. St. Johns, Newfoundland continues to report its expectations that a new pulp or paper mill is likely, possibly in Labrador.

—E. P. N.

WOODPULP: U. S. PRODUCTION, CONSUMPTION, INVENTORIES, DECEMBER, 1950
(Tons of 2,000 pounds)

Grade	U. S. Production: Tons	U. S. Production: % of Base	Consumption in paper & bd. manuf.	End of Month Inventories: At pulp mills, for later sale	End of Month Inventories: At paper & board mills: Dec. 1950	At paper & board mills: Nov. 1949	At paper & board mills: Dec. 1949
Total	1,284,797	91.2	1,413,504	11,810	404,043	394,703	413,074
Sulfite, Total..	244,463	91.4	276,215	4,508	179,003	176,126	225,184
Bichd. Total.			169,126	3,302	84,573	81,574	102,962
Dissolving ..			5,515		10,930	9,351	
Softwood ...			153,858		69,868	68,068	99,894
Hardwood ..			10,753		3,777	4,155	3,078
Unbichd. ...			107,089	1,205	94,430	94,552	122,222
Sulfate, Total.	644,564	93.2	718,324	4,262	172,267	169,444	131,712
Bichd. Total.			168,628		95,270	98,534	61,882
Semi-bichd. .			35,244		3,467	3,519	4,241
Unbichd. ...			514,452		73,530	75,391	65,549
Soda	35,701	71.8	40,854	461	9,990	10,907	13,294
Groundwood ..	205,517	88.4	233,019	120	38,188	33,880	35,915
All others.....	154,555	82.4	155,092	459	n.a.	n.a.	6,969

Based on Bureau of Census figures. n.a.—not available.

Paperboard Production (Tons)*

	Feb. 10 1951	Feb. 3 1951	Feb. 11 1950
Production	237,247	240,200	209,827
New Orders....	226,546	345,524	201,511
Unfilled Orders.	748,012	761,828	365,243

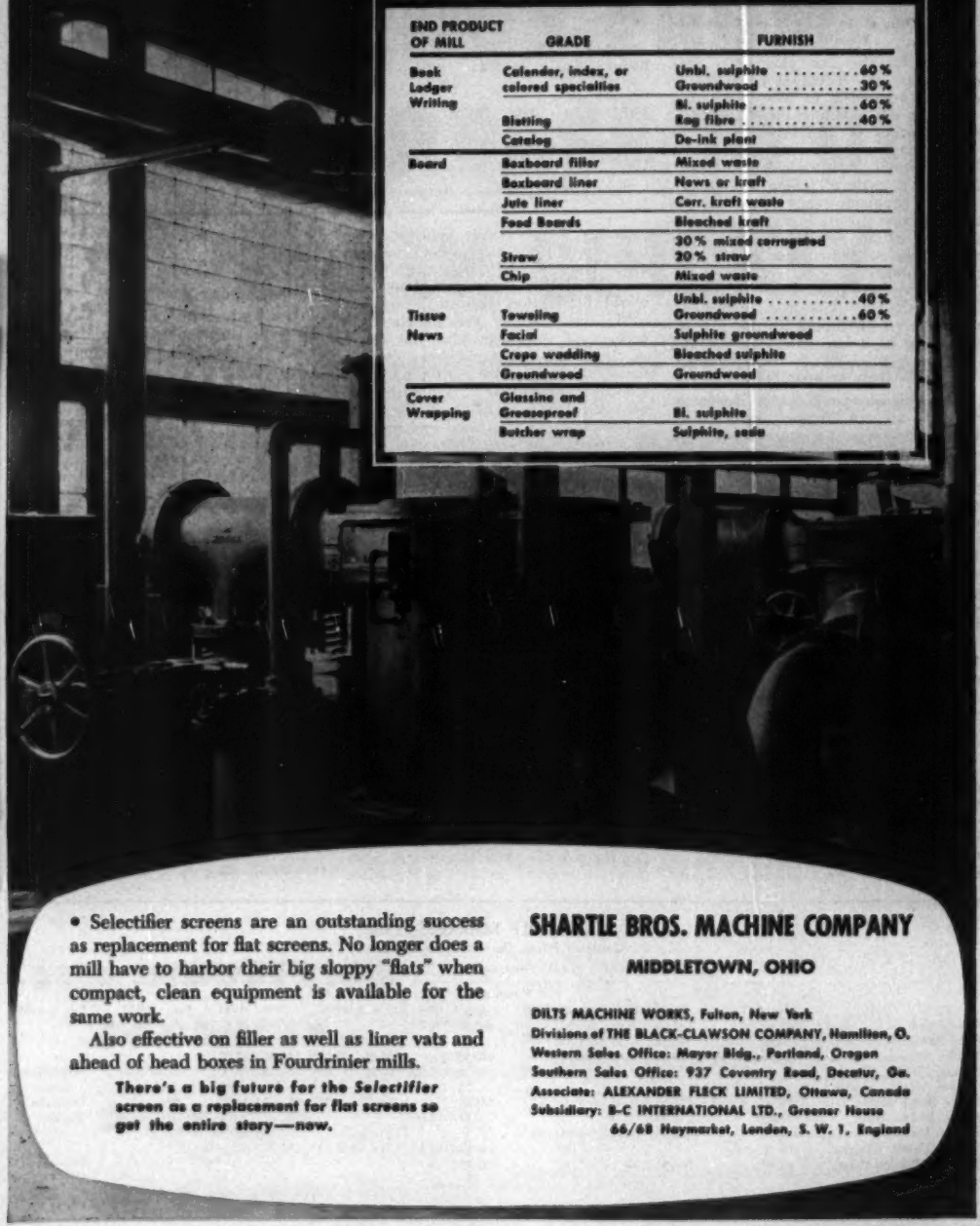
* Source: NPA.

WOOD PULP MARKETS, 1950
Contract Prices, Per Short Air-Dry Ton

	Delivered, with varying freight allowances: U. S. Jan. 1, 1950	U. S. Jan. 1, 1951	Canadian Jan. 1, 1950	Canadian Jan. 1, 1951	Atlantic Ports: Swedish Jan. 1, 1950	Swedish Jan. 1, 1951	Finnish Jan. 1, 1950	Finnish Jan. 1, 1951
Groundwood	$65.00/ —	$85.00/100.00	$65.00/ 67.50	$85.00/100.00				
Soda, Bleached	113.00/ —	140.00/142.50	113.00/ —					
Sulfate, Bleached	118.00/126.00	135.00/200.00	126.00/ —	175.00/ —	125.00/128.00*	180.00/187.00†		
Sulfate, Unbl'd North'n...			82.50/105.00	140.00/155.00	82.50/ 85.00*	155.00/185.00†	Competitive with Domestic Grades	Competitive with Overseas Grades
Sulfate, Unbl'd South'n...	90.00/ 82.50							
Sulfite Bichd. Sftwd.....	118.00/ —	135.00/165.00	118.00/ —	145.00/ —	118.00/ —*	175.00/ —		
Sulfite Bichd. Hdwd.....	113.00/ —	150.00/175.00		132.50/150.00				
Sulfite, Unbichd.	100.00/ —	132.50/150.00	100.00/ —		100.00/ —*	155.00/165.00		
Sulfite, Unbl'd Glassine...	105.00/ —		105.00/ —	140.00/142.50	104.00/105.00*	157.00/ —		
Siderums Pulping News...	65.00/ —	106.00/ —	65.00/ —	106.00/ —				

* On dock. † Delivered.

Selectifier screens replacing flats



END PRODUCT OF MILL	GRADE	FURNISH
Book Ledger Writing	Calender, index, or colored specialties	Unbl. sulphite .....60% Groundwood 30%
	Blotting	Bl. sulphite .....60% Rag fibre 40%
	Catalog	De-ink plant
Board	Boxboard filler	Mixed waste
	Boxboard liner	News or kraft
	Jute liner	Corr. kraft waste
	Food Boards	Bleached kraft
	Straw	30% mixed corrugated 20% straw
	Chip	Mixed waste
Tissue News	Toweling	Unbl. sulphite .....40% Groundwood 60%
	Facial	Sulphite groundwood
	Crepe wadding	Bleached sulphite
	Groundwood	Groundwood
Cover Wrapping	Glassine and Greaseproof	Bl. sulphite
	Butcher wrap	Sulphite, soda

• Selectifier screens are an outstanding success as replacement for flat screens. No longer does a mill have to harbor their big sloppy "flats" when compact, clean equipment is available for the same work.

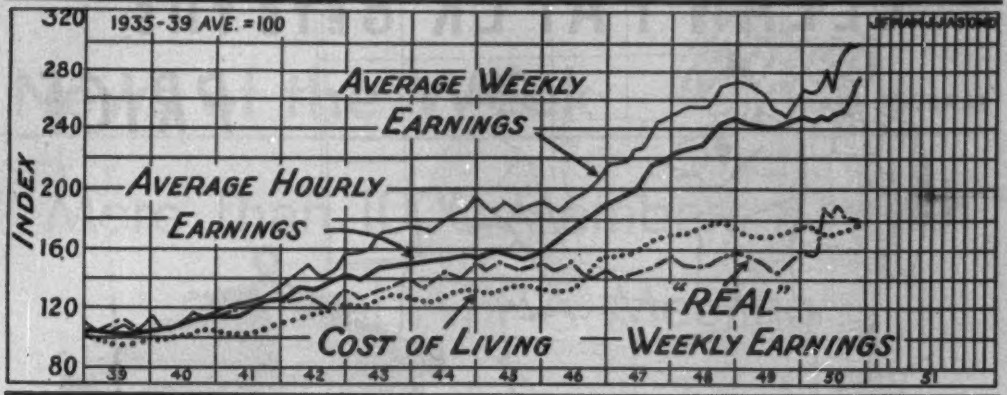
Also effective on filler as well as liner vats and ahead of head boxes in Fourdrinier mills.

There's a big future for the *Selectifier* screen as a replacement for flat screens so get the entire story—now.

SHARTLE BROS. MACHINE COMPANY

MIDDLETOWN, OHIO

DILTS MACHINE WORKS, Fulton, New York
Divisions of THE BLACK-CLAWSON COMPANY, Hamilton, O.
Western Sales Office: Mayer Bldg., Portland, Oregon
Southern Sales Office: 937 Coventry Road, Decatur, Ga.
Associate: ALEXANDER FLECK LIMITED, Ottawa, Canada
Subsidiary: B-C INTERNATIONAL LTD., Greener House
66/68 Haymarket, London, S. W. 1, England

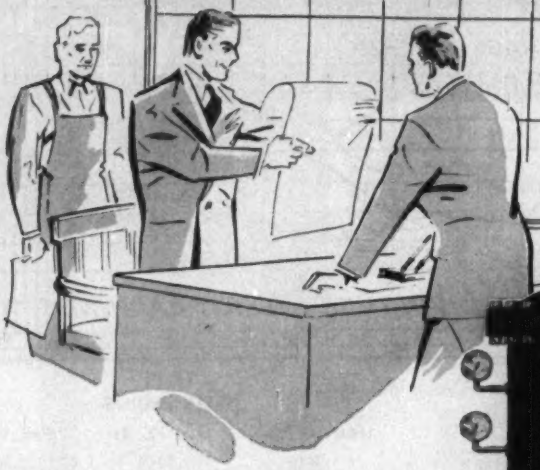


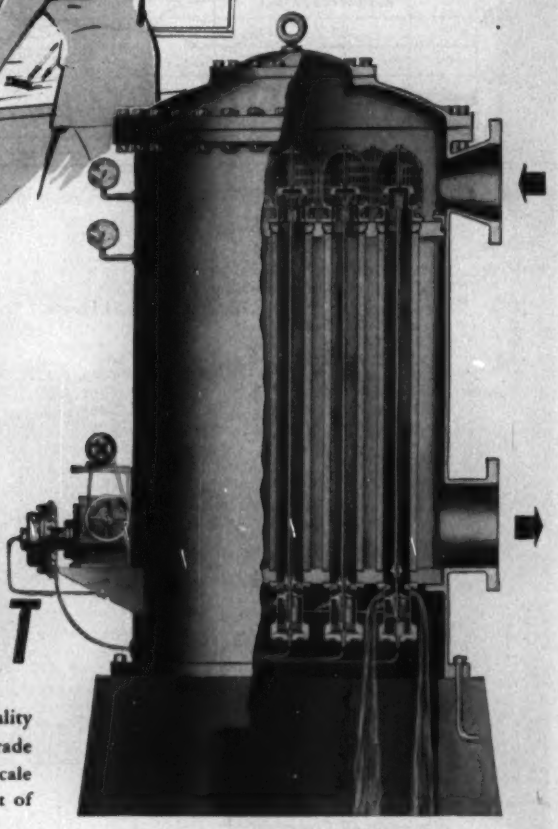
Weekly Brief of Important Figures

Source	Production	WEEK ENDING Feb. 10, '51	Jan. 13, '51	Feb. 11, '50
APPA	Paper Production Percent Capacity[3]	98.4	100.4	96.3
	Unbl. Kraft Paper Production Percent	101.3	98.3	94.0
NPA	Paperboard Operating Ratio Percent Inch Hours	104	106	93
		Dec. 1950	**Nov. 1950x**	**Dec. 1949**
APPA	Paper Production[6] (Except Newsprint and Building Papers) ....Tons	795,000	872,000	739,789
	New Orders ....Tons	792,000	831,000	729,665
	Unfilled Orders ....Tons	862,300	869,900	486,860
	Shipments ....Tons	805,000	872,000	739,566
		[4]Jan. 1951	**Dec. 1950**	**Jan. 1950**
NPA	Paperboard Production ....Tons	1,176,679	862,905	858,800
	New Orders ....Tons	1,349,991	778,394	860,300
	Unfilled Orders ....Tons	761,828	617,245	337,800
	Our Customers Activities Index[5]	**Latest Mo.[6]**	**Previous Mo.[6]**	**Year Ago[6]**
FRS	Manufactures Total Index	226	230	180
	Durable Mfg. Index	260	264	181
	Nondurable Mfg. Index	198	202	178
	Chemical Products Index	283	282	247
	Mfg. Food Products Index	166	177	162
	Printing and Publishing Index	182	183	167
ODC	Magazine Advg.-Printer's Ink Index	342	342	308
	Retail Sales Combined Adjusted Index	324.0	322.9	301.0
	Drug Index	219.9	223.4	215.7
	General Merchandise Group Index	314.8	299.5	286.9
	Grocery and Combination Index	398.6	394.8	365.6
	Prices Index			
BLS	Consumers Price Index[1]	175.6	174.8	168.6
	Wholesale all Commodities[2]	171.6	169.1	151.6
	Wholesale Foods[2]	175.2	172.5	158.9
	Commodities other than Farm Products and Foods[2]	163.5	161.5	145.0
	Wholesale Pulp and Paper[2]	178.6	173.4	156.5
	Purchasing Power of Dollar, Consumers Prices[1]	56.9	57.2	59.3
	General Activity Index			
FRS	Mfg. Production-Worker Payroll	415.8	403.4	320.9
	Unemployment Compensation Initial Claims (M)	907	720	1,545
	Miscellaneous Carloadings-Thousands of Cars	1,569	1,673	1,250
	Electric Output (Million KW hr.)	34,072	34,307	28,616
PTJ	Average 32 P & P Common Stocks as of Feb. 13	$38.57	$35.66	$30.76
	Average Indicated Dividends Common Stocks as of Feb. 13	$ 2.39	$ 2.39	$ 2.29

[1] 1935-39=100 Unadjusted Index
[2] 1926=100
[3] New 6-7 day basis.
[4] For Five Weeks
[5] For details see APPA Monthly Statistical Summary—December 1950 Estimated Figures
[6] Latest Month Available on Request
x Unrevised figures.

CLEAN PAPER GETS THE PRICE





ADAMS

WATER FILTRATION GETS THE DIRT

In kraft or tissue, book or newsprint—water quality is as critical as chip quality. No matter what grade of pulp or paper you make, sand, grit and pipe scale are expensive when they keep your product out of the top price brackets.

Water filtration with the fully automatic Adams Poro-Screen or Poro-Stone Filter takes out price-lowering impurities *before* they become part of the stock. Continuous backwashing effectively prevents clogging of filter elements—avoids costly, cumbersome cleaning operations.

Remember—in its early stages your product is about 98% water, and most water-borne impurities stay with the stock.

Find out what Adams filtration has done in situations like yours. Write for the new 20 page booklet on water filtration in the Pulp and Paper Industry, Bulletin No. 691.

R. P. ADAMS COMPANY, INC.

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Paper TRADE JOURNAL

More Than 1000 Members At 74th Annual APPA Meeting

Express Confidence In Meeting Demand

Despite many new problems of production and distribution brought on by the current national emergency, pulp and paper industry leaders express confidence that they will be able to meet military and civilian demands in 1951.

This optimistic tone seemed to be the dominant theme among the more than 1000 members of the American Paper and Pulp Assn. as they assembled at the Waldorf-Astoria Hotel for the opening of their 74th annual convention on February 18.

E. W. Tinker, executive secretary of the APPA, at an early morning press conference, indicated that the industry was fully prepared to meet its obligations on its own initiative without stimulus in the form of government financing.

GEORGE OLMSTED, JR.
President APPA

"Over the past ten years, the pulp and paper industry has almost doubled in size," Mr. Tinker said. "It has been a characteristic of the industry that responsible executives are constantly seeking opportunities for expansion where such expansion can be based upon sound economics. This has been true in the past and it will be true in the future, barring unwarranted interference.

"No sound business judgment would permit the vast expenditures that would be required to bring about surplus production under present conditions," Mr. Tinker continued. "The impact of the rearmament program was sudden. All elements have led to fears of shortages. However, unbiased analysis of the record indicates beyond question that the pulp and paper industry can meet the country's essential requirements and, further than that, it can and will expand on its own initiative without stimulus in the form of government financing. The fact of the matter is that the use of government funds on new projects would indicate their speculative character.

"Perhaps excessive taxation and legalistic rituals will over the next few years stultify industrial expansion in the United States," he said. "The pulp and paper industry would, of course, not be impervious to the effects of these programs. However, I am encouraged to think that the Congress of the United States is becoming increasingly aware of the danger to the very mechanism wherein lies our strength, and it is to the wisdom of the Congress we must turn if we are looking for hope of future industrial development to meet the needs of our growth."

Speaking of the industry's outstanding record in 1950, Mr. Tinker said: "In every classification there was a substantial increase in production in 1950 over 1949. This was true even in the field of newsprint where production rose by 10.8 percent to a total of 1,017,322 tons. In the field of fine papers, production increased by 20.5 percent, and the average increase of paper production was 16 percent or nearly a million and a half tons. Paper and paperboard production rose from a total of 20,327,000 tons to 24,300,000 tons, an increase of 19.5 percent.

E. W. TINKER
Executive Secretary APPA

"Perhaps there are other industries that can equal this record, but nevertheless it represents a very real achievement, and had not the industry gone all out in a sustained production effort, users of paper would have found themselves in short supply to a point that would have been disturbing indeed.

"Some conception of what is happening on the demand side of the picture in the field of paper and paperboard can be gained from the figures, indicating apparent per capita con-

sumption. In 1948, the apparent per capita consumption was 356 pounds; in 1949, 331 pounds; and in 1950 the figure rose to the outstanding total of 380.5 pounds. It is interesting to note that if the trend over the past 20 years should continue to 1965, our overall consumption would reach a total of 36,290,000 tons, or a per capita use of 442.2 pounds.

"Of course, the production of paper and paperboard is contingent upon an available supply of fiber. Of particular concern is the supply of virgin fiber, in the form of woodpulp. Production of woodpulp presents an enviable record. During 1950, production averaged 1,235,500 tons monthly, with a cumulative production for the year of 14,827,152 tons, an increase of 2,655,000 tons over the comparable period in 1949. Due to record consumption, there has been a slight decline in inventories, but in anyone's book, the record indicates a real achievement.

"The price of paper and paper products is of concern to the customers of the industry. The manufacturers of pulp and paper, exclusive of newsprint, managed to keep their prices well below the average of the wholesale commodity price index. If newsprint is included, the margin between the commodity index and the average value per ton is even greater. Comparisons with the all-commodity index are generally used in judging comparative trends and on this basis it is obvious that the restraint used by the manufacturers of paper should command commendation rather than condemnation."

TAPPI ELECTS

The following officers were elected to head the Technical Assn. of the Pulp and Paper Industry for 1951: President, K. P. Geohegan; vice-president, George H. Pringle. Executive Committee: To serve three years — William F. Hathaway, Walter F. Holzer, Ward D. Harrison, Richard P. Price; to serve one year — James R. Lientz.

U. S. PULP PRODUCERS ASSN.

The U. S. Pulp Producers Assn. have elected the following to the Executive Board for 1951:

Regional Directors: New England, Downing P. Brown, Brown Co.; Middle Atlantic, H. S. Oliver, New York & Pennsylvania Co., Inc.; South, Stuart E. Kay, International Paper Co.; Lake States, W. M. Wright, Kimberly-Clark Corp.; West Coast, L. K. Larson, Weyerhaeuser Timber Co.

Directors at Large: R. M. Buckley, Soundview Pulp Co.; C. H. Conrad, Rayonier Inc.; Stuart B. Copeland, The Northwest Paper Co.; Willard J. Dixon, St. Regis Paper Co.; Amor Hollingsworth, Penobscot Chemical Fibre Co.; James L. Knipe, Union Bag & Paper Corp.; James L. Madden, Hollingsworth & Whitney Co.; Reuben B. Robertson, Jr., The Champion Paper & Fibre Co.; Lawson Turcotte, Puget Sound Pulp & Timber Co.; Joseph M. Wafer, West Virginia Pulp & Paper Co.

Executive Director: James L. Ritchie, 122 East 42nd Street, New York 17, New York.

President Olmsted's Statement

If the production rate of the pulp and paper industry is to keep on rolling at present levels the industry must supply able men for the staff of government emergency agencies so that a control job may be ably done.

In the year just passed the pulp and paper industry did its best job of all time. It made available more of its products than ever before. These products were of better quality than ever before and they were reasonably priced.

We are more than the sixth largest industry in the country. We are an essential, a vital industry, for every business office, every factory and every home in this nation uses paper.

Maintaining present productibn and the complicated system of distribution that gets our products to the user at the right time and at a fair price will require the greatest possible cooperation with the emergency government agencies that have been created to handle the present situation.

The paper industry is making every effort to staff these agencies with top flight talent, second stringers will not do. They must be capable and experienced men if we are to be sure that the government gets its guns, so to speak, while the civilian population gets as much butter as is humanly possible under the circumstances.

Two great changes in the Washington scene give hope that all of this can be accomplished. The one change is that a single man over-rides both the production and price control agencies. There is a better chance now, therefore, than there was in World War II, that the extremely delicate balance between price and production can be fairly maintained.

The second major change is that so-called "dollar a year men" can now be accepted in all government economic control agencies. This was not true in the last war. But, being true today, we can get more capable people to take on government service.

This industry has a vital obligation to government and a vital obligation to its customers — the American public. We are making every human effort to protect the interests of both.

WOOD PULP FIRM CHARTERED

DOVER, Del.—Great Lakes Products, Inc., wood pulp, has filed a charter of incorporation with the corporation department of the Secretary of State's office here. Capital of the firm was listed at 200 shares of stock, no par value. Corporation Trust Co., 100 West Tenth St., Wilmington, Del., is serving as the principal office.

TISSUE PRODUCTION—1948—1949—1950

1948 and 1949 from revised Bureau of the Census Figures. 1950 Tissue Association Estimates

Grade	Production Tons 1948	1949	1950	Per Cent Increase or Decrease 1949 over 1948	1950 over 1949
GRAND TOTAL	1,128,638	1,157,366	1,379,324	2.3	12.4
TOTAL SANITARY TISSUES	922,533	970,699	1,072,314		
Toilet Tissue Stock					
Total	478,430	487,192	537,329	1.8	10.3
Regular	405,165	389,860	407,227	—3.8	4.5
Facial Type	73,265	97,332	130,302	32.8	33.0
Toweling Stock					
Total	220,255	239,330	262,169	8.7	9.5
Industrial	169,842	178,538	187,189	5.1	4.8
Household	50,413	60,792	74,980	20.6	23.3
Facial Tissue Stock (except for toilet paper)	127,433	138,828	150,438	8.9	8.4
Napkin Stock	97,411	105,349	122,178	8.1	16.0
Total Industrial Tissues	205,095	186,667	307,010		
Waxing Tissue Stock	64,326	60,466	66,909	—6.0	10.7
Wrapping Tissue Stock	55,857	48,626	54,212	—12.9	11.5
Twisting Tissue Stock	19,338	18,102	21,050	—6.4	16.3
Pattern Tissue Stock	7,405	7,149	7,322	—3.5	2.4
Miscellaneous	58,169	52,324	57,517	—10.0	9.9

II

The above figures are only for grades covered by The Tissue Association statistical program. Census figures for total Tissue (sanitary and industrial)) production in these years are as follows:

Year	Production Tons Sanitary	Industrial	Total
1948	982,692	205,095	1,187,787
1949	1,006,168	186,667	1,192,835
1950	1,108,021	240,604	1,348,625

Wood Pulp Supply

James L. Ritchie

Executive Director, U. S. Pulp Producers

The supply of wood pulp available for domestic consumption in 1950 was the highest on record.

This country's aggregate new supply of wood pulp last year totaled over 17 million tons, exceeding the 1949 new supply by 24 percent and the 1948 supply by 14 percent.

The new supply of *market* pulp also established an all time record in 1950. Market pulp supply last year totaled 3,424,000 tons, exceeding the 1949 new supply by 37 percent and the 1948 supply by 9 percent.

Supply from Domestic Sources

Expansion of domestic pulp capacity during the postwar period averaged over a million tons a year.

Despite this phenomenal postwar expansion, the domestic pulp industry in 1950 enjoyed almost the highest operating rate in its history. Sulphite pulp production last year averaged 94 percent of productive capacity and sulphate production 98 percent. These 1950 operating rates are particularly notable when it is considered that prior to World War II, the pulp industry never succeeded in any calendar year in operating at more than 85 percent of maximum operable capacity.

As a result of increased capacity and high operating rates, total domestic pulp production in 1950 broke all records. Production for the year totaled 14,827,000 tons, exceeding 1949 production by 22 percent and 1948 production by 15 percent.

Domestic sales of market pulp were at a peace time high in 1950. Last year's domestic sales of market pulp totaled 1,543,000 tons, exceeding 1949 sales by 26 percent and 1948 sales by 9 percent. Domestic sales in 1950 constituted 45 percent of our total market pulp supply.

The supply of domestic pulp that will be potentially available for domestic consumption in 1951 will depend upon a number of factors, some economic, some political. Indications are that the level of domestic capacity will continue to rise in 1951. Whether or not over-all demand will require full utilization of an expanded pulp capacity throughout 1951 is a moot question. If it does not, then the level of demand will be a primary factor in the determination of the level of pulp supply. If it does, then the impact of other factors upon the domestic industry's 1951 operating rate will have a major bearing on the supply of pulp prospectively available for normal United States consumption this year —for example, the impact of possible shortages of materials, such as sulphur or wood, and of services, such as transportation and manpower; or the impact of increased demands for nitration or for export under the government's mobilization program.

If the domestic industry is successful in resolving its production bottlenecks in 1951 and if the defense requirements of the government do not absorb too large a proportion of its production, there would appear to be some prospect of a potential increase in domestic pulp supply this year as compared with last. This conclusion would appear to be justified in the case of market pulp as well as "own use" pulp.

Outlook for Canadian Imports

This country's imports of wood pulp from Canada in 1950 totaled 1,712,000 tons, exceeding 1949 imports by 30 percent and 1948 imports by 7 percent.

Of the total receipts from Canada last year, 1,237,000 tons (72 percent) were for the market and 474,000 tons (28 percent) for "own use."

Imports from Canada constituted 10 percent of this country's total new supply of pulp in 1950 and 36 percent of its market pulp supply. Imports of both market and "own use" pulps exceeded all previous records.

Barring work stoppages due to shortages of materials or services or to other causes, current expansion in Canadian capacity and fuller utilization of existing Canadian facilities could result in larger exportable surpluses of Canadian wood pulp this year as compared to last.

In 1950 the United States received 92 percent of Canada's total exports of wood pulp. Whether or not it receives a comparable share in 1951 could depend in large measure upon the scope, nature and reasonableness of domestic price and distribution controls and upon Canada's views to the relative urgency of competing export demands.

Outlook for Overseas' Imports

In 1950, the United States received 668,000 tons of market pulp from Europe. This tonnage was equal to 19 percent of our total domestic new supply of market pulp.

Most observers seem to feel that, for several reasons, there will probably be some reduction in the supply of market pulp prospectively available from overseas' sources in 1951. The reasons cited are (1) the prospect of further integration of European pulp capacity, particularly in Finland, (2) increased demands upon the European supply to meet Europe's needs, and (3) the fact that prospective European supply will be entirely dependent this year upon current European production, rather than upon production and inventories as was the case a year ago.

The risk of a major diversion of United States imports from overseas, in the event of too rigid domestic price and distribution controls, is a further consideratioin that should not be overlooked in examining the outlook for imports from Europe.

Conclusion

The supply of wood pulp from Canada and the United States, potentially, could be greater in 1951 than in 1950; many bottlenecks could arise in both countries, however, to prevent full operation of existing facilities and full achievement of maximum potentialities.

Some decline in the volume of overseas' imports seems indicated for 1951; the measure of the decline may be determined in part by the character of our domestic controls.

If the full potentialities of North American supply can be realized and if the prospective decline in imports from overseas can be minimized by official restraint in the exercise of domestic controls, then there is a good prospect that this country's total supply of pulp in 1951 may exceed that of 1950.

Review of 1950 in the Unbleached Kraft Paper Industry

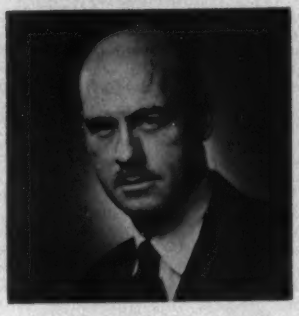
Dernell Every
Secretary, Kraft Paper Assn., Inc.

The kraft paper manufacturing industry ran full throughout 1950 and established a new production record for the year. In establishing this record it produced 2⅓ million tons of unbleached kraft paper, a 23 percent increase over 1949 and an 8 percent increase over the previous record established in 1948.

Up to the outbreak of the Korean War, late in June, the kraft paper industry had operated at 95 percent of capacity. It was already evident, therefore, at midyear that a new record was in the making. The invasion of South Korea and the drive for full remobilization which that invasion touched off added demand pressures which even all-out operations could not meet.

The manufacturers not only witnessed a return of the substantial demands for those kraft papers which World War II had shown were particularly important to a war economy, but there developed such a buying spree on the part of the American public that wrapping paper surged back as a major volume item after a quiescent decade. In other words, the kraft industry experienced war-demand pressures on top of "business as usual" requirements. This combination of demands could not be met with the result that the National Production Authority under its Regulation No. 2 issued on October 3, 1950 found it necessary to include packaging materials as requisitionable on any Defense Orders.

Sustained and urgent high demands for kraft paper as well as ideal supply conditions made possible the attainment of a new high record of production. Throughout the year the industry was never seriously threatened with supply problems. Manpower, although tight, was never so scarce as to cause manufacturing inefficiencies. No serious fuel problem developed at any time during the year. That part of the industry which is dependent upon purchased pulp for its raw material suffered, particularly in the second half of the year but, fortunately, more than 85 percent of the industry is self sufficient in this respect. There were shortages too in the final quarter in such other raw materials as chlorine, sulphur, salt cake, alumn, and rosin. The industry, however, managed to piece out its supplies to end the year with a 94 percent average



operating rate, thereby maintaining the record operations that had been accomplished in the first half and attaining a new full-year production record.

Looking into the new year, the industry is faced with an expanding demand as the pace of remobilization is increased. Since there do not appear to be any inventories in the hands of its customers the industry's orders are of the "urgent" kind; so much so that most customers can only be allocated a computed prorated quantity of paper each month. Doing business under such conditions is difficult and thankless and, unfortunately, discourages new business and expansion, but it is an emergency method that seems to be the fairest under the circumstances.

As for new capacity, there are five new machines which should be completed this year, although so late as to add little new production in 1951. On the other hand there are increasing shortages in those raw materials already mentioned plus other threatened shortages in copper paper machine wires and many metals which go into paper machine parts. The freight tie-ups which resulted recently from the "sicknesses" of the railroad switchmen show how easily the distribution of the industry's products can be thrown off balance. Government regulations themselves, may operate in practice to reduce the industry's total productivity. This is particularly true of conservation orders which endeavor to change pulp furnishes, reduce basis weights or encourage the production of one grade of paper over that of another. All of these possibilities are potential deterrents to continued operation at the full rates achieved throughout 1950. In other words, to equal 1950 the new year must achieve a twelve month continuation of 1950's ideal operating conditions.

Granted that there will be some new capacity added to the industry later in the year and admitted that the industry seems capable of increasing its operating efficiencies whenever it is under pressure to meet heavy demands for its products, there is always the chance that it may be forced through one extraneous reason or another to falter in its record pace. For this reason, I do not anticipate a new record production of unbleached kraft paper in 1951. It would be my guess that the 1951 kraft paper production would approximately equal that of 1950.

COMPETITION

WASHINGTON, D. C. — Shortage of paper for cartons is beginning to be felt in the glass container industry, members have advised the NPA.

In addition, glass manufacturers reported, they are having to compete for soda ash.

Members of the tight cooperage manufacturing industry also reported they are in competition with the paper industry, in obtaining lumber which the paper producers need for pulpwood, and which also is now in demand for plywood.

BAG FIRM CHARTERED

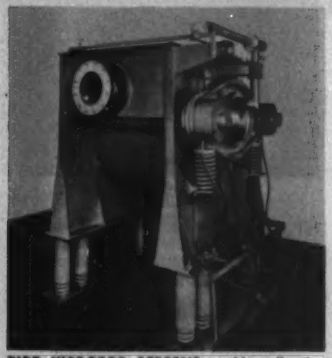
DOVER, Del. — Bridgeville Bag Co., Inc., has filed a charter of incorporation with the corporation department of the Secretary of State's office here. Capital of the firm was listed at 500 shares of stock, no par value. Principal office of the firm is located in Bridgeville, Del.

OFFICERS—NATIONAL COUNCIL FOR STREAM IMPROVEMENT, INC.

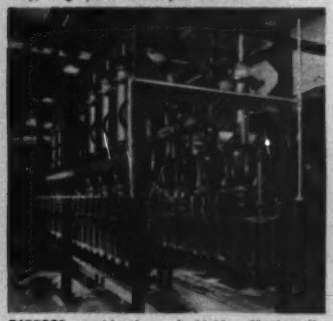
At the eighth Annual Meeting of the Board of Governors of the National Council for Stream Improvement, Inc., held at the Waldorf-Astoria on February 21, George E. Dyke, president of Robert Gair, Co., Inc., was re-elected Chairman of the Board of Governors. Other officers elected include the following: Vice-Chairmen, C. B. Morgan, W. Irving Osborne, Jr.; Treasurer, J. D. Zink; Executive Secretary and Assistant Treasurer, Russell L. Winget.

BIRD SCREENS are universally identified with continuous production at maximum paper machine speed. Ninety per cent of all the paper made in North America passes through Bird Screens.

BIRD JONSSON SCREENS handle big tonnages of high consistency pulp with minimum fibre loss. Screening efficiency is remarkably high; screening cost per ton is low.



BIRD VIBROTOR SCREENS combine vibration and rotation to handle 50 to 80 tons of pulp per day through .012" plates at 1.3 to 1.5% consistency, using 1/3 HP or less per ton.



DIRTECS provide thorough, highly effective dirt removal both ahead of the paper machine and for screen tailings.

FOR PRODUCTION *you need production-proved* BIRD MACHINERY

For bulletins, recommendations, layouts and estimates, get in touch with

BIRD MACHINE COMPANY

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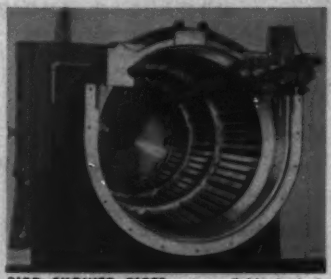
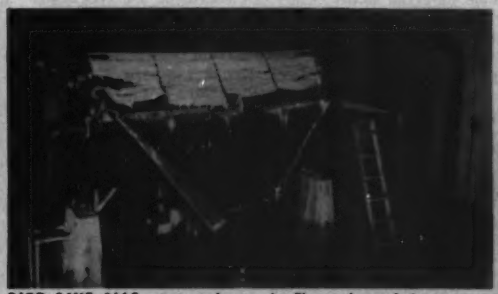


BIRD SHOWER PIPES are available in both Self-Cleaning and Oscillating types. The Oscillating Shower, pictured, increases screening efficiency, uses much less water.

VICKERY FELT CONDITIONERS keep fast running press felts continuously clean and open, eliminating midweek shutdowns for felt washups and speeding drying.

BIRD CONSISTENCY REGULATORS for holding stock consistency to not more than 0.1% heavier or lighter than desired. Dependable, economical, easy to install anywhere.



BIRD SAVE-ALLS return good, expensive fibres to be made into paper instead of going to waste; savings in stock water and time quickly pay for the recovery system.

VICKERY DOCTORS keep papermaking rolls clean and shining — in shape to make more as well as better paper. Engineered for every roll.

More And More Paper Production Records

Production of 24,350,000 tons in 1950 is 20% higher than 1949 output

Morris C. Dobrow

Executive Secretary, Assn., Writing Paper Manufacturers, New York

The paper industry made a new high production record in 1950.

It is probable that still another new record will be established in 1951—unless all-out war severely reduces the industry's manpower and greatly hampers the flow of raw materials to producing units. Operations in the paper industry, as in every other industry, will, of course, be conditioned by the march of events in the months ahead, both at home and abroad.

National Security

Events of the last six months have exposed and intensified the dangers we have been trying to avoid or forget ever since the end of World War II in 1945. It may be trite to say it—but it is a reality that we must face—"we won the war and lost the peace."

It is easy to blame others for the ineptness, the lack of foresight that put us, as a nation, "behind the 8-ball," after so magnificent a victory as our Armed Forces achieved, both in Europe and Asia, 5 years ago.

Nearly all of us, as part of the American people, must face-up to the fact that we demobilized too soon in an insecure world. As a nation, we were too eager to eliminate the military establishments and transfer a good deal of the costs to the benefits of the welfare state.

There is now going on in our country one of the greatest debates in our history. It is right and proper that there should be such stock-taking and searching analysis of our foreign policy of the past and of what it should be in the future. This debate is taking place in and out of the halls of Congress among the political leaders of our country. Everyone appreciates its importance, and I believe that all of us have a responsibility to try to understand the fundamental factors involved.

For myself, I hope we shall never lose sight of the fact that the great price which Russia covets is Western Europe. Western Europe—with its Ruhr and Saar Valleys, and the industrial plants with their technical "know-how"—is what Russia wants. With them, she would achieve an industrial power close to ours and we, then, would be the last nation in her way to world domination.

Our Challenge

The main problems that confront the nation today are the need for increased military strength and security and the equally great need to keep the economy sound. Solving these will require—

1). Increased production and productivity of the goods needed for defense.

2). Economy in the consumption of civilian goods and greater savings for investment in Government bonds or in new production facilities.

3). Economy in Government expenditures; elimination of waste and postponement of all expenditures that can be deferred until the emergency is over. We must have a "pay-as-you-go" balanced budget.

4). And, above all, control of inflation. Direct price controls alone cannot succeed. Indirect controls limiting further the supply of money and credit must also be imposed. Too many dollars are chasing too few goods.

Inflation

Inflation ceased to be a moot question in 1950. It became a visible reality to all. The rapid spiraling of prices became alarming to the public and the Government. A number of measures for controling credit and reducing the supply of money were undertaken by the fiscal authorities, and under the Defense Production Act, the Economic Stabilization Agency planned for, and finally put into effect, mandatory price controls in 1951.

Sensational price advances took place in the basic raw materials traded in international markets. Since pre-Korea, these prices advanced 73 percent. Domestic agricultural commodities showed an increase of 16 percent, while manufactured goods advanced 11 percent. Wages advanced about 10 percent.

Wage and price controls were put into effect to suppress further inflation, but ESA officials were cognizant that many other things would have to be done to make such drastic controls effective for any length of time. Effort will be made to suppress and perhaps alleviate some of the worst effects of the inflationary spiral in the basic raw materials by international arrangement at the diplomatic level, by the control of prices and allocation of supplies of such commodities as rubber, tin and wool and perhaps woodpulp, insofar as imports and exports from the North American continent are concerned.

Aside from the external influences, such as the control and allocation of scarce materials which leave the country or may be imported, the two most important factors as they affect domestic markets and prices, are the limitation on the supply of money (currency plus demand deposits) and, perhaps the most important of all, the price of food at retail. Price controls and wage controls cannot long be successful unless you can tie down the price of food at retail. The ESA will have a difficult, if not impossible task, until the Defense Production Act is amended to permit control of agricultural food prices in the same manner as this Agency has control over other raw

Among the important industrial fields in which Heyden products are used constantly and in ever increasing tonnages are:

DRUGS AND PHARMACEUTICALS.
CHEMICALS, PETROLEUM AND SOLVENTS.
PLASTICS, TEXTILES AND LEATHER.
PAPER AND PULP.
FOODS AND BEVERAGES.
PAINTS, VARNISHES, LACQUERS AND RESINS.
PERFUMES AND COSMETICS.

The Heyden technical staff invites consultation and inquiries on your problems of production, formulation and improvement of existing processes. The following list of Heyden products may help you to select and investigate the chemical you are seeking to do a better and more economical job in your plant or process.

HEYDEN PRODUCTS FOR INDUSTRY AND RESEARCH

ACETYLSALICYLIC ACID

BENZALDEHYDES
- Benzaldehyde
- Ortho-Chlorobenzaldehyde
- Para-Chlorobenzaldehyde
- 2,4-Dichlorobenzaldehyde
- 3,4-Dichlorobenzaldehyde

BENZOATES
- Calcium Benzoate
- Ethyl Benzoate
- Methyl Benzoate
- Sodium Benzoate

BENZOIC ACIDS
- Benzoic Acid
- Ortho-Chlorobenzoic Acid
- Para-Chlorobenzoic Acid
- 2,4-Dichlorobenzoic Acid
- 3,4-Dichlorobenzoic Acid

BENZOTRICHLORIDES
- Benzotrichloride
- Ortho-Chlorobenzotrichloride
- Para-Chlorobenzotrichloride
- 2,4-Dichlorobenzotrichloride
- 3,4-Dichlorobenzotrichloride

BENZOYL CHLORIDES
- Benzoyl Chloride
- Ortho-Chlorobenzoyl Chloride
- Para-Chlorobenzoyl Chloride
- 2,4-Dichlorobenzoyl Chloride
- 3,4-Dichlorobenzoyl Chloride
- Anisoyl Chloride

BENZYL CHLORIDES
- Benzyl Chloride
- Ortho-Chlorobenzyl Chloride
- Para-Chlorobenzyl Chloride
- 2,4-Dichlorobenzyl Chloride
- 3,4-Dichlorobenzyl Chloride

BROMIDES
- Ammonium Bromide
- Calcium Bromide
- Lithium Bromide
- Potassium Bromide
- Sodium Bromide
- Strontium Bromide

CHLOROTOLUENES
- 2,4-Dichlorotoluene
- 3,4-Dichlorotoluene
- Ortho-Chlorotoluene
- Para-Chlorotoluene

CREOSOTES
- Creosote
- Creosote Carbonate
- Calcium Creosotate
- Potassium Creosote Sulfonate

FORMALDEHYDES
- Formaldehyde
- Paraformaldehyde
- Hexamethylenetetramine

FORMATES
- Formic Acid
- Sodium Formate

GLYCEROPHOSPHATES
- Calcium Glycerophosphate
- Ferric Glycerophosphate
- Glycerophosphoric Acid
- Magnesium Glycerophosphate
- Manganese Glycerophosphate
- Potassium Glycerophosphate
- Sodium b-Glycerophosphate
- Sodium Glycerophosphate

GUAIACOLS
- Guaiacol
- Guaiacol Carbonate
- Calcium Guaiacolsulfonate
- Magnesium Guaiacolsulfonate
- Potassium Guaiacolsulfonate

PARASEPTS®
(Parahydroxybenzoates)
- Methyl Parasept
- Ethyl Parasept
- Propyl Parasept
- Butyl Parasept
- Benzyl Parasept

PENICILLIN

PENTACIZERS®
- Pentacizer 121

PENTAERYTHRITOLS
- Pentek®
- Dipentek®
- Tripentek®
- Monopentek
- Pentaerythritol, Purified

PENTAMULLS®
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PENTAWAXES®
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- Pentawax 177
- Pentawax 217
- Pentawax 218
- Pentawax 227
- Pentawax 262

PROTEINATES
- Collargol® (Colloidal Silver)
- Copper Protein
- Silver Protein Mild
- Silver Protein Strong

SALICYLATES
- Ammonium Salicylate
- Calcium Salicylate
- Lithium Salicylate
- Magnesium Salicylate
- Manganese Salicylate
- Methyl Salicylate
- Phenyl Salicylate
- Salicylic Acid
- Sodium Salicylate
- Strontium Salicylate

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OTHER PRODUCTS AND INTERMEDIATES
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- Aktivin®
- Anisic Acid
- Benzal Chloride
- Benzilic Acid
- Beta-Oxynaphthoic Acid
- Carpolin®
- Dibenzyl Ether
- Flexin P®
- Hydrochloric Acid
- Hypol
- Ichthynat® (Ichthammol)
- Lignocol®
- Methylal
- M.D.A.®
- (Methylene Disalicylic Acid)
- Para-Hydroxybenzoic Acid
- Paratoluidine
- Phenol
- Propyl Gallate
- Resorcinol
- Saccharin
- Saccharin Sodium
- Sulfidal® (Colloidal Sulfur)
- Thorotrast®
- (Colloidal Thorium Dioxide)
- Tolyl Aldehyde
- Umbrathor®
- (Colloidal Thorium Dioxide)

SPECIAL PRODUCTS FOR RESEARCH
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- Benzoin
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- Benzyl Sulfonyl Chloride
- 4,4'-Dichlorobenzophenone
- Ortho-Chlorocinnamic Acid
- Ortho-Creosotinic Acid
- Para-Benzyl Phenol
- Pentaerythritol Diacetal
- Pentaerythritol Dibutyral (N)
- Pentaerythritol Diformal
- Pentaerythritol Dipropional
- Trioxane

FINE HEYDEN CHEMICALS

SERVING INDUSTRY THROUGH FINER CHEMICALS

TABLE I

UNITED STATES CAPACITY AND PRODUCTION BY GRADES

Grade	1939 Capacity	1939 Actual Production	1939 %	1948 Capacity	1948 Actual Production	1948 %	1949 Capacity	1949 Actual Production	1949 %	Preliminary 1950 Capacity	Preliminary 1950 Actual Production	Preliminary 1950 %
Writing Paper	747,100	594,594	80	1,008,000	908,901	90	1,013,000	806,133	80	1,012,000	969,000	96
Other Fine Papers	165,570	128,308	78	273,000	231,958	85	273,000	208,821	76	273,000	254,800	93
Book Paper Uncoated	1,921,260	1,534,591	80	1,680,000	1,580,742	94	1,618,000	1,395,755	86	1,636,000	1,577,000	96
Paper — Machine Coated* Printing & Converting				882,000	798,407	91	968,000	911,878	94	1,046,000	1,015,000	97
Groundwood Papers Uncoated	631,470	548,342	86	795,000	771,850	97	775,000	674,542	87	710,000	694,000	98
Newsprint	988,280	954,259	97	893,000	875,760	98	924,000	917,778	99	1,033,000	1,017,000	98
Tissue Paper	772,480	648,429	84	1,322,000	1,187,787	90	1,334,000	1,192,735	89	1,370,000	1,348,000	98
Wrapping Paper and Special Industrial	2,609,580	2,238,993	86	3,559,000	3,342,637	94	3,788,000	3,015,638	80	3,968,000	3,699,000	93
Building Paper and Insulation	938,370	659,090	70	1,389,000	1,348,321	97	1,389,000	1,161,625	84	1,410,000	1,415,000	100
All Other Papers	252,340	185,342	73	110,000	107,305	98	110,000	86,113	78	111,000	105,000	95
TOTAL PAPER	9,026,450	7,484,148	83	11,911,000	11,153,668	94	12,192,000	10,371,018	85	12,569,000	12,093,000	96
Paperboard and Building Board	7,530,960	6,025,494	80	11,478,000	10,774,680	94	11,762,000	9,956,204	85	11,856,000	12,207,000	103
Total Paper and Paperboard	16,557,410	13,509,642	82	23,389,000	21,928,348	94	23,954,000	20,327,222	85	24,425,000	24,300,000	99

*Included in book paper uncoated.

Writing Paper Manufacturers Association

materials, manufactured goods and wages.

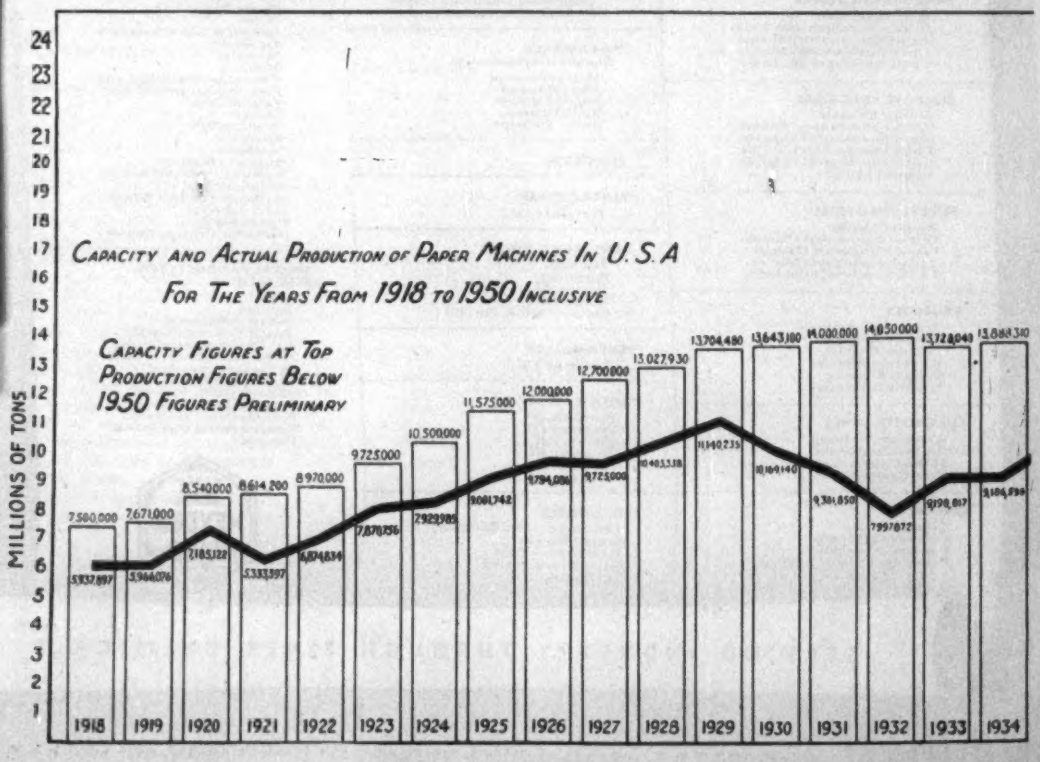
General Business

The Mobilization Program continues to dominate the business outlook. So long as the program lasts, business activity will be at high levels, accompanied by full employment, a tight labor market and larger national output. This has sparked a greater-than-normal increase in paper consumption.

We are witnessing, again, miracles of production on the American scene. The Federal Reserve Board index, which measures physical goods production in the U. S., rose from 183 in January 1950 to 220 in January 1951.

The gain for the year 1950 over 1949, was 14 percent—17 percent for durable goods and 11 percent for the so-called soft goods industries.

Some of the durable goods industries, particularly automobiles and housing, will have to be curtailed sharply—perhaps, by as much as 50 percent from the 1950 peak, to make way for the defense program. Part of this cut already has occurred.



The non-durable goods industries have risen to higher levels than they have been at any time—peace or war. Possibly with some minor interruption, they are likely to continue at high record levels throughout this year. These are the industries that are the largest consumers of paper.

Paper Production—1950 and 1951

The American paper industry has made a succession of new high records in 35 out of the 50 years since the beginning of the century. A year to year decline in production is the exception rather than the rule. It has occurred only in years of cyclical depression and in periods of postwar readjustment.

The 1950 production of paper and paperboard in the U. S. is estimated to have been 24,300,000 tons, as against a production of 20,327,000 tons in 1949 and the previous record of 21,928,000 tons in 1948.

The 1949 to 1950 gain of 20 percent appears fantastic for an industry with a usual 4 percent per annum rate of growth.

Production in the first half of 1950 was 11,700,000 tons, a new high record, exceeding the 1948 record rate of production. Then came Korea and more production records. Production in the second six months of 1950 was 12,600,000 tons. In the months of October, November and December, production of the industry exceeded an annual rate of 26 million tons for the first time.

TABLE II
U.S. Capacity and Production
Paper and Paperboard

Year	Capacity Tons	Production Tons	% of Capacity
1899	2,782,200	2,167,593	78
1904	3,858,000	3,106,696	81
1914	6,439,000	5,152,705	80
1918	7,500,000	5,937,897	79
1919	7,671,000	5,966,076	78
1920	8,548,000	7,185,122	84
1921	8,614,200	5,333,397	62
1922	8,970,000	6,874,834	77
1929	13,704,480	11,140,235	81
1930	13,643,100	10,169,140	75
1931	13,971,700	9,381,840	67
1932	13,728,040	7,997,872	58
1937	15,572,850	12,837,003	82
1939	16,557,410	13,509,642	82
1943	20,282,000	17,370,965	86
1946	20,420,000	19,277,667	94
1947	22,025,476	21,113,053	96
1948	23,389,000	21,928,348	94
1949	21,954,000	20,327,222	93
1950	24,425,000	24,300,000	99

That's a lot of paper . . . . . The questions being asked at every turn are:

Has the 1950 production been consumed, or has some of it gone into somebody's stockpile?

Will the 1951 production exceed last year's record—and by how much?

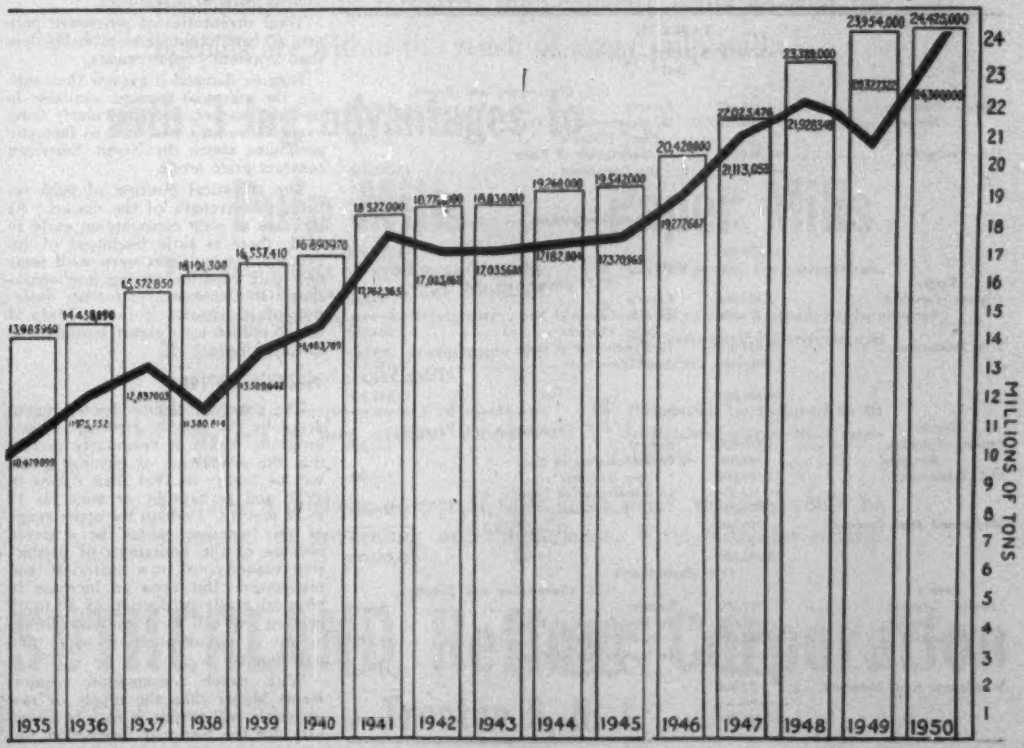
Although our industry is full of statistics, it has no accurate measure of consumption, except in the case of newsprint paper used in printing metropolitan dailies. In that field, statistics are clear: that the new records of newsprint consumption have outstripped the increased supply of newsprint available to us from Canada and, to a lesser degree, from American production.

Taking overall domestically-produced paper and paperboard, the situation might be rationalized in this way:

In 1949, production was only 20,327,000 tons. It was apparent, however, to everyone in the industry that there was inventory liquidation month after month in most of that year. Hence, it is believed that *consumption* in 1949 was more like 21,000,000 tons.

On the basis of an overall increase, 14 percent in physical goods production in the U. S. in 1950 over 1949, the *consumption* of domestically-produced paper and paperboard probably was something like 23,900,000 tons. Paper, however, is more closely related to the non-durable goods industries which had an estimated increase of 11 percent in 1950 over 1949. This would indicate a consumption of something like 23,300,000 tons. On the basis of these assumptions, consumption of domestically-produced paper and paperboard in 1950 was somewhere between 23,300,000 and 23,900,000 tons, against an actual production of 24,300,000 tons.

If these assumptions are valid, it is evident that the margin between production and actual consumption did not



become significant until the fourth quarter, and it may take several months more for it to show up as ample inventories somewhere along the line between the mill and the point of actual usage of the paper.

Increases in Productive Capacity

The capacity of the U. S. paper industry was 24,425,000 tons at the end of 1950. In 1939, capacity was 16,557,000 tons. At the end of the war this capacity had been increased to 20,282,000 tons, and during the first five postwar years beginning with 1946, capacity was increased by more than 4 million tons. Facilities for producing an additional million tons per year of paper and paperboard are now being built. These productive capacities are measured on a six-day period. Seven-day production in some areas, where custom and adequate supplies of raw materials permit, resulted in actual production exceeding rated capacity.

The uses of paper have exceeded past expectations because of the great growth of business in the postwar period and the added spurt now being engendered by the Mobilization program.

The standard of living of the American people has continued to increase in the last few years, and this has resulted in further increases in the per capita use of paper. Furthermore, the population of the U. S. continues to grow faster than had been previously expected. The latest Census figures indicate 152 million people at the beginning of 1951, compared with 130 million at the end of 1938. Tentative forecasts have been made for a population increase to 167 million by 1960.

The present per capita consumption is about 375 pounds and further growth is confidently expected. Accordingly, there is good reason to believe that paper requirements of the country will be such as to occupy all existing paper machine capacity in the immediate future, if the necessary raw materials and labor are available.

The ten-fold growth of the paper industry since the beginning of the century, with the ability of the people of this country to consume this paper, is probably one of the wonders of this age. The growth of the productive facilities, as well as production of the last 50 years, is indicated in the records of the signficant periods, as shown in Table II.

Pulpwood and Wood Pulp Inventories Reduced

Pulpwood

Pulpwood consumed by the U. S. pulp industry in 1950 increased 14 percent while inventories *decreased* by 25 percent. Strenuous efforts are being made to improve inventory positions in anticipation of continued high-level requirements of pulp for paper, paperboard and other uses.

Waste paper campaigns are getting under way to help supplement the fiber supply. About 27 percent of the total consumption of paper in the country is now being salvaged. During the war, in 1944, it reached a high of 36 percent. Of course, the potential supply in actual tonnage, due to increased consumption of paper, is much greater now than it was during the war. In other words, paper salvaged for consumption in 1944 was close to 7 million tons, at the present time it is about 7,900,000 tons, but the potential is in the neighborhood of 10 million tons.

Wood Pulp

Nearly all primary markets have been operating under abnormal conditions. This is also true for the raw material sources used by the paper industry.

The supply of pulp is at record levels, but consumption requirements have outstripped the gain in supply. The net supply of wood pulp for the U. S. in 1950 was 17,206,000 tons — a gain of 23 percent over the previous year.

Actual consumption in the manufacture of paper, paperboard and non-paper products and a small amount of exports exceeded the available supply by approximately 22,000 tons, resulting in a further slight shrinkage of previously reduced inventories.

Total inventories of purchased pulp are at bare minimums—probably less than a month's requirements.

Because demand is greater than supply, the marginal tonnage available in the spot market, and particularly from overseas sources, has risen to fantastic premiums above the North American contract price levels.

The statistical position of pulp reflects the strength of the market. At the rate of pulp consumption early in 1951, there is little likelihood of inventory accumulation, even with some new pulp capacity coming into operation. On the contrary, further depletion of inventories is rather likely if the 26 million-ton (annual) production rate continues.

Prospects for 1951

The current business boom, engendered by the rapidly growing defense program, makes it reasonably certain that the production of physical goods will be higher in 1951 than it was in 1950, and perhaps by as much as 15 to 20 percent. Perhaps the upper range of this increase cannot be achieved because of the limitations of productive capacity, of raw materials and manpower. But even an increase in physical goods production of 10 to 15 percent will call for a considerable increase in consumption of paper and paperboard.

With paper consumption requirements higher than the supply of raw materials will permit, it may be necessary for the National Production Au-

TABLE III

TOTAL WOOD PULP—ALL GRADES

Supply		*U.S. Consumption and Exports*	
1947			
Imports—Canadian	1,538,000	Exports	130,000
European	792,000	In Manufacture of Non-Paper Products	570,000
U.S. Production	11,946,000	In Manufacture of Paper and Paperboard	13,285,000
			13,985,000
		Inventory Replacement	291,000
	14,276,000		14,276,000
1948			
Imports—Canadian	1,602,000	Exports	94,000
European	575,000	In Manufacture of Non-Paper Products	608,000
U.S. Production	12,872,000	In Manufacture of Paper and Paperboard	14,347,000
	15,049,000		15,049,000
1949			
Imports—Canadian	1,314,000	Exports	122,000
European	449,000	In Manufacture of Non-Paper Products	575,000
U.S. Production	12,172,000	In Manufacture of Paper and Paperboard	13,606,000
	13,935,000		
Withdrawal from Inventory	368,000		
	14,303,000		14,303,000
1950 (Preliminary)			
Imports—Canadian	1,712,000	Exports	96,000
European	867,000	In Manufacture of Non-Paper Products	645,000
U.S. Production	14,827,000	In Manufacture of Paper and Paperboard	16,487,000
	17,206,000		
Withdrawal from Inventory	22,000		
	17,228,000		17,228,000

What is pre ?

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Pulp Mills

1. **A wide variety of grades and qualities can be made from one standard cook by varying pre-beating *only*.**
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3. **Individual requirements of customers can be met without excessive costs.**

Paper Mills

1. **Lower power consumption.**
2. **Ability to use a much higher percentage of Southern and Western pulps.**
3. **Pulps can be tailored to fit individual paper mill conditions.**

If you're a producer or user of sales grade pulps, we know you'll be interested in pre-beating with Sutherlands. Write today for details.

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thority to bring back some of the conservation limitation orders used so effectively in World War II. These orders spread the fiber supply over greater yardage by reducing basis weights and limiting consumption of important classes of users by some reductions from a base period.

Of one thing we can be sure—we shall have more regulations of all kinds in 1951. Mr. Charles E. Wilson, who has the utmost confidence of all classes of people in the country, recently indicated that across-the-board controls must be imposed by the Government with speed and forthrightness to preserve the country's economy in the face of present emergency expansion and expenditures.

We must put an end to inflationary pressures if we are to maintain the value of, and confidence in, the dollar. Further severe inflation would tend to destroy the middle classes and endanger our free institutions. More government regulations in the present emergency are not the pleasantest kind of medicine, but it is the price we have to pay to mobilize our strength to preserve our freedoms. We need greater and greater production for survival, and there is little doubt that the American people will meet the challenge.

Review of Market Pulp—1950

Karl A. Clauson
Executive Secretary, Association of Pulp Consumers, Inc.

The year 1950 probably represents the best single year which the non-integrated mills have enjoyed during the past twenty years. While the demand for paper and paper board continued to climb throughout the year, the supply of market pulp, although gradually tightening, was adequate for near capacity operation of most mills.

Receipts

Preliminary figures by the Bureau of Census indicate that the total receipts of market pulp at paper and board mills from all sources was approximately 2,870,000 short tons. Of this total 1,180,000 tons, or 41 percent, was from domestic mills; 970,000 tons, or 34 percent, from Canada; and 720,000 tons, or 25 percent, from Scandinavia.

During the year a new Canadian market sulphate mill was brought into production which helped push Canadian market pulp shipments to the United States to an all time high.

Consumption

The total consumption of market pulp by the paper and paper board industry during 1950 was approximately 2,900,000 short tons. This figure breaks down as follows by grade:

Sulphite Total	1,489,000
Bleached	877,000
Unbleached	612,000
Sulphate Total	969,000
Bleached	397,000
Semi-Bleached	30,000
Unbleached	542,000
Soda	117,000
Other	325,000
Total All Grades	2,900,000

A comparison of the above totals with the historical record indicates that the three bleached grades (sulphite, sulphate and soda) individually, as well as in the aggregate, reached all time high points in 1950.

Table I gives the approximate consumption of each grade of market pulp by integrated, semi-integrated, and non-integrated mills.

The integrated mills, according to Government definition, are those mills which manufacture at least 90 percent of their pulp requirements. During 1950, mills in this group consumed approximately 268,000 tons of purchased wood pulp. (There are an estimated 155 mills in this category in the United States.)

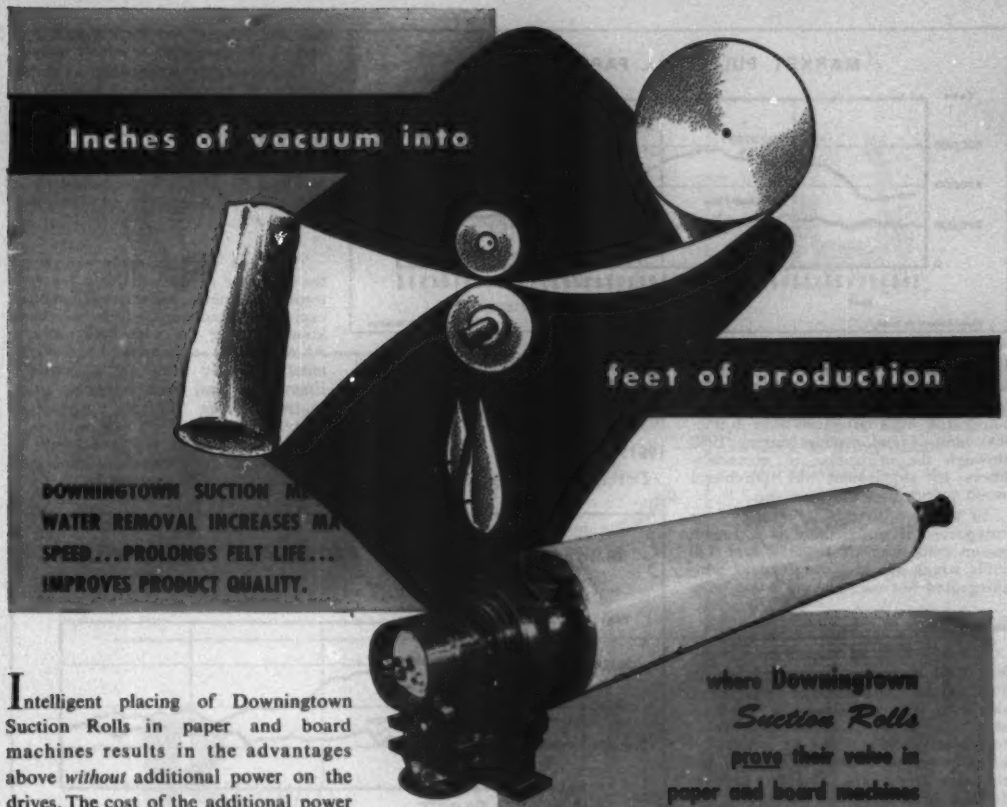
The semi-integrated mills are mills which own pulp producing capacity but produce less than 90 percent of their needs. Mills in this category consumed about 913,000 tons of purchased wood pulp during 1950. (There are roughly 80 mills in this category.)

The non-integrated mills are those which have no pulp-producing capacity of their own and consequently must purchase all of their wood pulp in the open market. There are approximately 305 small and medium sized mills in

TABLE I
CONSUMPTION OF MARKET PULP IN THE PAPER AND BOARD INDUSTRY, 1950

	Consumption [1]			
	Integrated	Semi-Integrated	Non-Integrated	Total
Sulphite	68,000	465,000	956,000	1,489,000
Bleached	38,000	243,000	596,000	877,000
Unbleached	30,000	222,000	360,000	612,000
Sulphate	125,000	346,000	498,000	969,000
Bleached	70,000	121,000	206,000	397,000
Semi-Bleached	5,000	10,000	15,000	30,000
Unbleached	50,000	215,000	277,000	542,000
Soda	19,000	18,000	80,000	117,000
Other	56,000	84,000	185,000	325,000
Total	268,000	913,000	1,719,000	2,900,000

Source: Bureau of Census.
[1] Month of December has been estimated.



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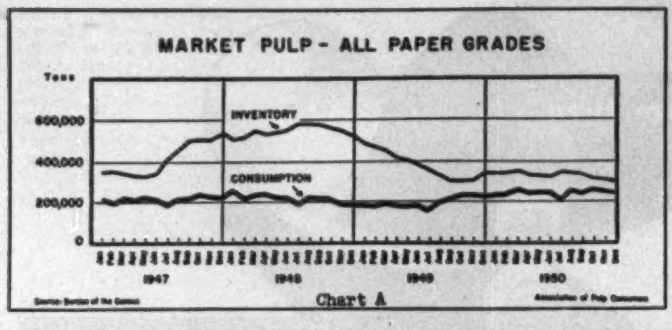

Chart A

this category, and their consumption aggregated 1,719,000 tons during the year. (It is estimated that the non-integrated mills produced over 6,500,000 tons of end product during 1950 through the utilization of secondary fibers to supplement the purchased wood pulp.)

In addition to the foregoing three categories of mills, there is a fourth group consisting of slightly over 130 mills which are also classified as non-integrated but consume no wood pulp.

Inventories

The inventory of market pulp in the hands of consumers fluctuated less in 1950 than it has during any year since the war. The accompanying Chart A shows the relationship between inventories and consumption of all grades of pulp at paper and board mills for the past four years. Chart B gives a further breakdown of the inventory-and consumption-relationship of the principal grades of market pulp for the same period.

The inventories of market pulp declined gradually from July to the end of the year with every indication that this trend would continue well into 1951.

Prices

The wood pulp price structure strengthened throughout the year for all grades of market pulp. During the very early part of the year, there was a slight spot market under the general-contract price levels. This disappeared by the end of the first quarter and re-emerged above the general contract price level during the third quarter.

The contract prices for all grades, and from all areas, began rising in the third quarter; it went up again in the fourth quarter; and again for the first quarter 1951.

Domestic bleached sulphite showed the most restrained contract increases during the year, rising 14 percent from $118.00 per ton, delivered, in the first quarter 1950 to $135.00 per ton for the first quarter 1951.

Scandinavian unbleached sulphate proved to be the most volatile contract performer during the year, rising 113 percent from $82.50 per ton, delivered, during the first quarter 1950 to $162.50 per ton, on dock, for the first quarter 1951.

1951?

During 1951 it is generally expected that the demand for market pulp will exceed the maximum available supply.

The presently anticipated available supply of market pulp for the year 1951 will probably be further reduced by such things as the Government's action in imposing price controls, the sulphur shortage, the stepped-up nitrating pulp program, the talked-about international allocation of raw materials, etc.

The year 1950 probably represents the last year of the relatively free enterprise system under the modified capitalistic economy which we have known during the past half century. At the year's end, with the Government hurriedly declaring a National Emergency and then imposing price controls, wage controls, production controls, allocation of raw materials, excess profit taxes, etc., the future is so uncertain as to make any intelligent forecast virtually impossible.

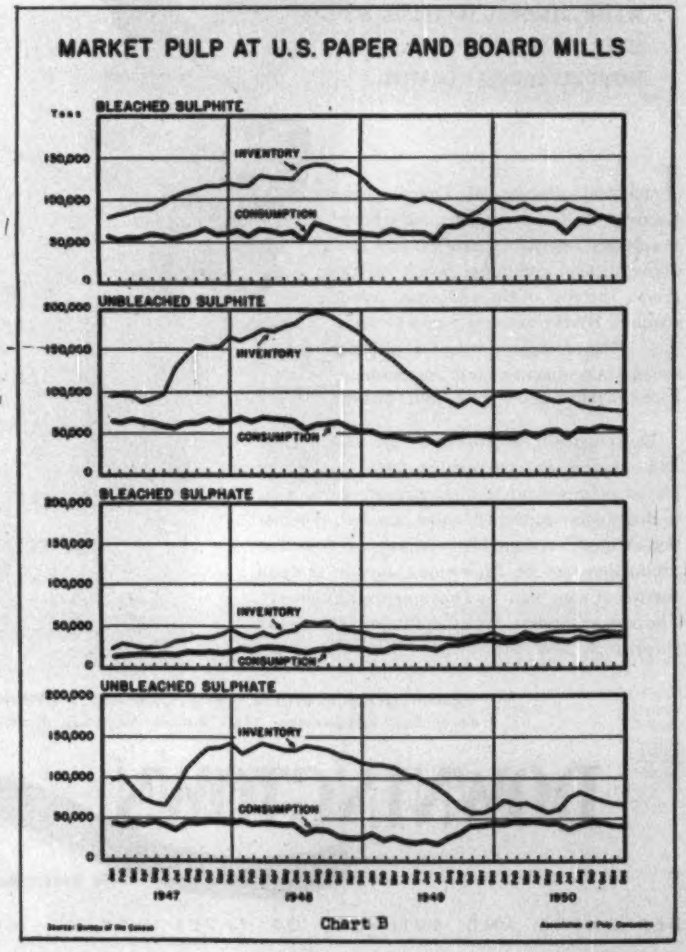

Chart B

Continuous

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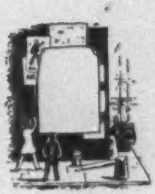

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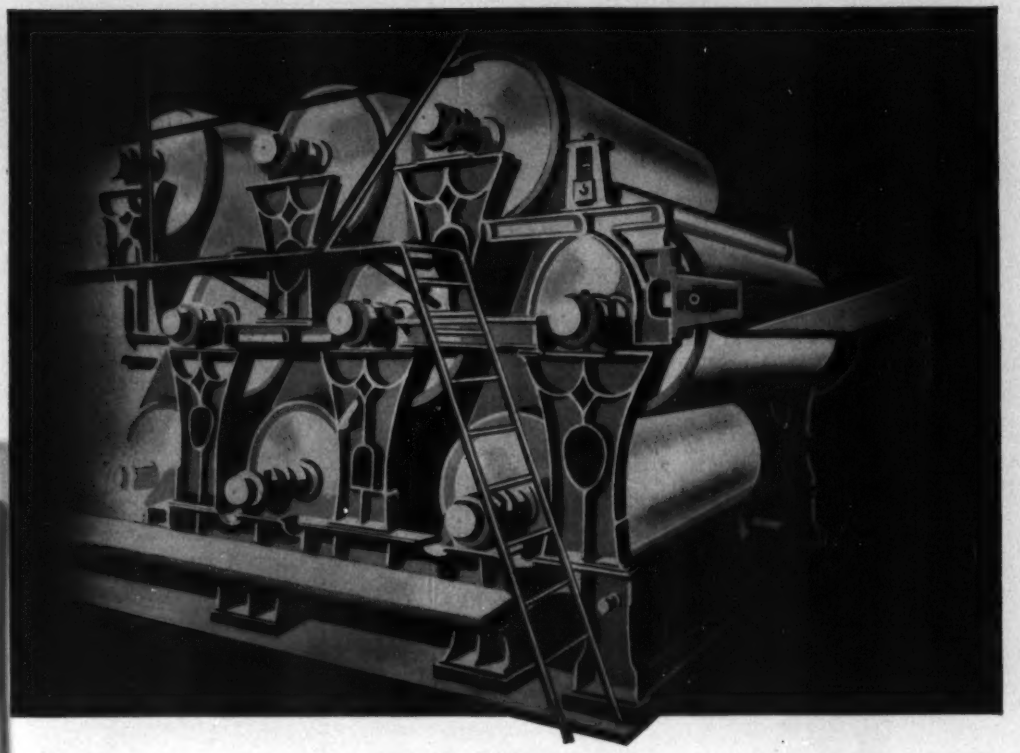

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Newsprint Paper in 1950

Vernon L. Tipka

Secretary-Treasurer, Newsprint Service Bureau

A casting-up of the account for the year 1950 indicates that it was one of heretofore almost unexcelled prosperity in the United States with output of industry, earnings, wages and dividends attaining new high levels.

Economic activity in the United States throughout the first half of the year was characterized by a steady rise from the recession levels of 1949 to peaks surpassing those of any previous non-war period. Despite the continuation of the so-called 'cold war', business activity during this period was almost entirely of a peace-time nature and some economic analysis—a number of whom questioned the soundness of certain factors sustaining the recovery—began to speculate as to its possible duration and the prospects of avoiding another recession.

Then, without warning, almost at mid-year came the Korean incident and the already high tempo of activity assumed an even more feverish aspect. The primary impact on the national economy of the aforementioned development took the form of a great buying wave by many individuals and business firms in anticipation of the time when a substantial proportion of the total output might be required to satisfy military production needs. This upsurge in demand found reflection in the rising trend of industrial production—still primarily civilian. Toward the end of the year, however, procurement for defense finally began to assume impressive proportions and became an important factor in maintaining overall output at high levels although it did bring about some disruption of normal production along with indications of greater dislocations still to come.

In the face of an apparently supercharged demand for its products the paper and paperboard industry in the United States found it necessary in 1950 to operate under forced-draft. The result of its productive efforts is estimated at a record high 24,250,000 tons of paper and board which was 19 percent above 1949 production and 10 percent greater than the previous peak attained in 1948. A noteworthy fact in connection with this outstanding production performance was that the 2,000,000 plus-ton month was commonplace with only four months of last year failing to exceed that never heretofore scaled peak. The Canadian counterpart of the domestic industry likewise reportedly attained new heights of achievement not only substantially in excess of the 1949 totals but also appreciably above the higherto record levels of 1948. A conservative estimate of the output of paper and board in Canada (including Newfoundland) in 1950 would probably be in excess of 6,700,000 tons so that combined production of the two countries probably aggregated about 31,000,000 tons.

Due principally to a decline in demand in overseas markets the continental newsprint paper industry began 1950 at a pace not calculated to surpass previous performance records. However, the increasing requirements of consumers in the United States later brought about a reversal of the declining trend and resulted in a record outpouring of tonnage for the year.

Production

The rise in output of newsprint paper in the United States in 1950 gave the domestic industry the rare experience of outpacing its giant contemporary in Canada in comparison with the preceding year on both a percentage and tonnage increase basis. Exceeding the 1,000,000 ton level for the first time since 1941, United States mills produced 1,004,000 tons of newsprint last year and surpassed the 1949 outturn by 104,000 tons or approximately 11½ percent. However, although last year's output represented a rebound of nearly 40 percent from the war-time low of 1944 it still fell 40 percent short of the record 1926 total of 1,684,000 tons.

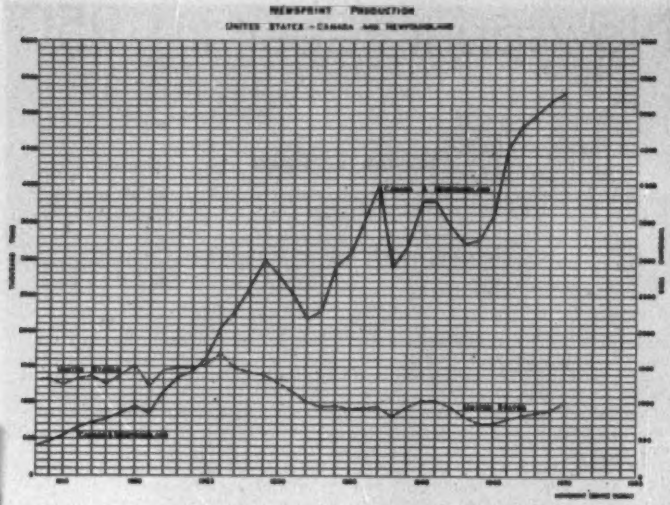
As a result of monetary devaluations and governmental restrictions against hard currency purchases, the Canadian (including Newfoundland) newsprint industry began the year faced with a lower overseas demand which in conjunction with temporarily less insistent domestic and United States requirements induced a lower level of operations during the first four months of 1950 than had prevailed in the comparable period of the preceding year. However, continued expansion of economic activity in the United States generated a rising demand for newsprint in this country which in turn was reflected in greater production so that total output for the year attained the new high mark of nearly 5,279,000 tons which was 102,000 tons or 2 percent greater than in 1949.

Combined North American production last year amounted to 6,282,000 tons and exceeded the 1949 total by 206,000 tons or nearly 3½ percent. Of the continental aggregate, 16 percent was produced in the United States and 84 percent in Canada (including Newfoundland). In 1949 the corresponding percentages had been a little less than 15 percent for the former and slightly in excess of 85 percent for the latter.

Since capacity of the United States mills regularly engaged in the manufacture of newsprint had been estimated at 992,000 tons for 1950, last year's operating ratio appeared to be in excess of 101 percent of this theoretical figure. However, the production total included some tonnage produced at mills usually making other grades therefore the ratio was not quite that high for the mills regularly producing newsprint. Nevertheless, the regular newsprint mills' productive facilities were utilized to the fullest possible extent. The Newsprint Association of Canada reports that the industry in that country had operated at an average of 101 percent of rated capacity, making this the fourth successive year wherein actual output had exceeded the theoretical optimum as based on past performance. This achievement was the more remarkable when it is recalled that operations during the first quarter of the year had averaged slightly less than 98 percent of capacity.

Shipments

Under pressure of rising over-all demand, shipments of newsprint paper from all North American mills rose in the aggregate to a new peak of 6,317,000 tons in 1950. They were approxi-



mately 35,000 tons more than production during that period and 255,000 tons above the hitherto record shipments in 1949. Movement of newsprint from Canadian production points in 1950 exceeded the preceding year's volume by 146,000 tons while the increase in shipments from the United States mills amounted to 109,000 tons.

The original destination of the vast bulk of these shipments—5,733,000 tons or nearly 91 per cent—were purchasers in the United States while slightly more than 5½ percent went to Canada and 3½ percent went to other markets. Changes in the 1950 pattern of distribution from that in 1949 may be discerned from the corresponding percentages in the earlier year which had been nearly 87 per cent for the United States, 5½ per cent for Canada and approximately 7½ per cent for the other markets.

At the end of 1950 total manufacturers' stocks were at the lowest level on record. In total, the amounted to 97,000 tons and were 26 per cent less than on December 31, 1949. Not at the end of any of the 30 preceding years—for which period the records are reasonably complete and accurate — had North American producers' total inventories dropped below the 100,000 ton level, with the previous nearest approach to this figure having been made in 1947 when stocks had aggregated 102,000 tons. Combined stocks of manufacturers in Canada and the United States represented about 4¾ days' production at the average daily rate attained in 1950.

Exports

Exports of newsprint paper from Canada in 1950 are reported by the Dominion Bureau of Statistics to have had a monetary value of $485,746,000 of which $463,039,000 represented the value of shipments to the United States while exports to all other markets were valued at $22,707,000. Of all the commodities entering into Canada's export trade—at peace-time peak levels in 1950—newsprint occupied the position of primary importance, substantially in excess of any other item. Moreover, newsprint accounted for 15½ percent of the dollar volume of Canada's export trade which had amounted to $3,118,400,000 last year, while 23 percent of the value of total Canadian shipments to the United States represented newsprint.

According to official Ottawa reports, 4,938,000 tons of newsprint paper were exported from Canada in 1950 of which 4,724,000 tons or nearly 96 per cent went to the United States and 214,000 tons to overseas destinations. The following tabulation, showing exports of newsprint from Canada and Newfoundland during the preceding six years compared with the 1935-1939 average, is based on data compiled by the aforementioned source for Canada including Newfoundland since absorption of the latter by the former as of April 1, 1949. Totals for periods preceding that date are arrived at by combining DBS reports of exports from Canada with the Newfoundland mills' reported shipments.

NEWSPRINT EXPORTS FROM CANADA *
(Short Tons)

	U. S. A.	Overseas	Total	Index Numbers 1935-1939 Average = 100 U. S. A.	Overseas	Total
1950	4,724,000	214,000	4,938,000	197	29	158
1949	4,354,000	444,000	4,798,000	181	61	153
1948	4,164,000	539,000	4,703,000	173	74	150
1947	3,887,000	715,000	4,602,000	162	98	147
1946	3,532,000	685,000	4,217,000	147	94	135
1945	2,655,000	720,000	3,375,000	111	98	108
1935-1939 Average	2,401,000	732,000	3,133,000	100	100	100

* Includes Newfoundland.

Overseas newsprint exports from Canada due to previously mentioned causes were 52 per cent less in 1950 than in 1949 and also were below the 1935-1939 average volume by 71 per cent. In none of the preceding six years did exports to overseas destinations equal the 1935-1939 average although in 1945 and 1947 they were but 2 per cent lower in volume. On the other hand there has been a consistent and pronounced expansion of shipments to the United States throughout this period. This movement in 1950 was at an all-time high level, 8½ per cent greater than in 1949 and 97 per cent above the base-period average.

Of the drastically curtailed overseas exports, the largest quantity—33,000 tons—went to Mexico followed by 27,000 tons to New Zealand, 25,000 tons to Cuba, 20,000 tons to the United Kingdom and 19,000 tons to Ireland. Also, a total of 33,000 tons went to various South American countries, of which 10,000 tons were shipped to Venezuela and 9,000 tons to Colombia.

United States

In contrast to the decline in Canadian exports to markets other than the United States, exports of newsprint paper from this country in 1950 were greater than in the preceding year and also exceeded those in any year since 1941.

Department of Commerce reports are the basis for the statement that exports of newsprint produced in the United States had amounted to 44,000 tons last year and were greater by 5,000 tons or nearly 14 per cent than in 1949. Approximately 42 percent of the total or more than 18,000 tons went to the Philippine Islands, while 7,000 tons were to Mexico and 4,000 tons to India and Pakistan combined. Exports to South and Central America totaled 9,000 tons and those to Cuba amounted to 2,000 tons. Shipments to all of the foregoing destination, with the exception of those to Mexico, were in larger volume than in 1949.

* * * *

In the aggregate, the North American newsprint industry last year exported 258,000 tons of paper to other parts of the world. This was a drop of 225,000 tons from the 483,000 tons exported in 1949 and one of 663,000 tons from the 921,000-ton peak export year of 1940 when not far from 20 per cent of the continental output went to other world markets.

The following tabulation based on U. S. Department of Commerce, Dominion Bureau of Statistics and Newfoundland mill reports shows the

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movement of newsprint from and to North America during the last twenty-five years and indicates the extent to which this continent has been a net exporter. The North America net export balance, during the 25-year period covered, has fluctuated considerably with the trend having been consistent in only two five-year spans, i. e. a rising tendency in 1932-1936 and a declining one in 1946-1950 in the final year of which it reached its lowest point of the preceding quarter of a century.

MOVEMENT OF NEWSPRINT PAPER FROM AND TO NORTH AMERICA *
(Short Tons)

Year	Exports	Imports	Excess of Exports over Imports
1926	201,000	100,000	101,000
1927	246,000	122,000	124,000
1928	381,000	116,000	265,000
1929	462,000	96,000	366,000
1930	452,000	134,000	318,000
1931	386,000	151,000	235,000
1932	393,000	145,000	248,000
1933	496,000	153,000	343,000
1934	674,000	147,000	527,000
1935	746,000	197,000	549,000
1936	836,000	242,000	594,000
1937	815,000	294,000	521,000
1938	697,000	243,000	454,000
1939	641,000	310,000	331,000
1940	921,000	34,000	887,000
1941	699,000	3,000	696,000
1942	339,000	2,000	337,000
1943	432,000	....	432,000
1944	598,000	....	598,000
1945	764,000	....	764,000
1946	713,000	13,000	700,000
1947	743,000	129,000	614,000
1948	567,000	267,000	300,000
1949	483,000	255,000	228,000
1950	258,000	170,000	88,000

* United States, Canada and Newfoundland.

Imports

According to Department of Commerce data only recently made available, imports of newsprint paper into the United State attained the record high volume of 4,860,000 tons of which 96½ per cent came from Canada (including Newfoundland) while 3½ per cent originated in Europe. Imports from Canada amounted to 4,690,000 tons were at an all-time peak while the 170,000 tons imported from Europe were 85,000 tons less than the 1949 volume.

The table below, based on data compiled by the aforementioned source, shows the prewar and postwar record of imports into this country. The most notable feature thereof is the great rise in imports from Canada since the end of World Warf II—which in 1950 were 95 per cent above the 1935-1939 average. The wartime hiatus in imports from Europe ended in 1946 when a small quantity arrived from that source while in 1948 the prewar average was surpassed. Thereafter, however, less newsprint came from Europe and in 1950 these imports amounted to only two-thirds of the 1935-1939 average volume.

Of the European newsprint paper which came into the United States in 1950, Finland supplied the largest quantity by far—144,000 tons or 84½ per cent of the total—followed by Sweden with 18,500 tons and slightly less than 5,000 tons from Norway. The remainder was made up of small shipments from France, the Netherlands, Switzerland and the United Kingdom. Imports in all cases except those from the Netherlands and Switzerland were in lower volume than in 1949. Beginning with 1920—when imports from Europe first became of any consequence—and going through 1950, a total of 4,133,000 tons of newsprint from this source became available to consumers in this country. For this period as a whole, Finland was the most prolific supplier with 1,784,000 tons or 43 per cent of the European total having originated therein while Sweden's contribution thereto amounted to 1,440,000 tons or nearly 35 per cent. The next largest quantity came from Norway—421,000 tons or 10 per cent of the total—while Germany, despite cessation of imports therefrom since 1939, accounted for 362,000 tons or just under 9 per cent.

Stocks

Since most newsprint mills possess only relatively limited storage facilities, their output is usually shipped as soon as it is made, therefore, manufacturers' inventories are as a rule not very large. For instance, during the 20-year period preceding 1950, the peak end-of-year stocks were those in 1939 when they amounted to 271,000 tons but were equivalent to only 6½ per cent of that year's outturn.

As heretofore noted, on December 31, 1950 total inventories of all North American producers amounted to 97,000 tons and were at the lowest year-end level on record. On the same date stocks on hand and in transit to the newspapers reporting to the American Newspaper Publishers Association totaled 425,000 tons or an aggregate of 522,000 tons for the two groups compared with 578,000 tons at the end of December, 1949.

The ANPA publishers' stocks at the end of 1950 were 21,000 tons less than at the end of the preceding year and 33,000 tons below inventories on December 31, 1948 while on the other hand they were 48,000 tons larger than in 1947 and 132,000 tons greater than at the 1946 year-end. Although these publishers' stocks are quite substantial in actual volume of tonnage, they provide no more than a fairly reasonable safeguard against possible delays in deliveries from the mills such as have been encountered in the recent past.

Consumption

A not altogether anticipated appreciable increase in the volume of newspaper advertising linage in 1950 above the previous record high levels of 1949 appears to have been the major factor in the continued rise of newsprint consumption in the United States last year.

The publication of 525 newspapers in the United States which report their consumption data to the ANPA entailed the usage of 4,542,000 tons of newsprint paper in 1950. This was greater by 284,000 tons or nearly 7 per cent than the hitherto record consumption in 1949. The growth in this group's newsprint consumption in the postwar period is illustrated by the fact that in the first year thereof—1946—they had used the then record total of 3,136,000 tons or 1,405,000 tons less than last year's usage.

Currently the American Newspaper Publishers Association estimates that consumption of the aforementioned group of publishers represented 76½ per cent of the total usage of newsprint paper in the United States. Projecting, on this basis, the tonnage reported consumed by these publishers, an aggregate of 5,937,000 tons is arrived at. This total is 408,000 tons or nearly 7½ per cent above estimated consumption in 1949 and approximately 2,450,000 tons or 70 per cent greater than in 1945.

The following table beginning with the record pre-depression year of 1929 shows consumption of the ANPA group—which includes most of the larger publishers—and the estimated total usage by all newsprint consumers in the United States along with the year to year percentage changes therein.

On the basis of the foregoing total consumption figure and the Bureau of the Census estimate of population as of July 1, 1950, the per capita use of newsprint paper in the United States last year rose to the all-time peak of 78.4 pounds. This was 4.3 pounds greater than in 1949 and 16.2 pounds

IMPORTS OF NEWSPRINT INTO THE UNITED STATES
(Short Tons)

	From Canada *	From Europe	Total	Index Numbers 1935-1939 Average = 100 Canada *	Europe	Total
Postwar—						
1950	4,690,000	170,000	4,860,000	195	66	182
1949	4,382,000	255,000	4,637,000	182	99	174
1948	4,126,000	267,000	4,393,000	171	104	165
1947	3,828,000	129,000	3,957,000	159	50	148
1946	3,479,000	13,000	3,492,000	144	5	131
Prewar						
1939	2,302,000	310,000	2,612,000	96	121	98
1938	2,031,000	243,000	2,274,000	84	95	85
1937	3,023,000	294,000	3,317,000	125	114	124
1936	2,509,000	242,000	2,751,000	104	94	103
1935	2,186,000	197,000	2,383,000	91	77	89
Prewar Average	2,410,000	257,000	2,667,000	100	100	100

* Includes Newfoundland.

NEWSPRINT CONSUMPTION IN THE UNITED STATES
(Short Tons)

Year	ANPA Group	Estimated Total	% Increase Over Preceding Year ANPA Group	Total
1929	3,550,000	3,780,000	7	8
1930	2,735,000	3,563,000	7*	6*
1931	2,626,000	3,245,000	4*	9*
1932	2,266,000	2,840,000	14*	12*
1933	2,154,000	2,690,000	5*	5*
1934	2,486,000	3,058,000	15	14
1935	2,676,000	3,300,000	8	8
1936	2,954,000	3,650,000	10	11
1937	3,060,000	3,830,000	4	5
1938	2,738,000	3,458,000	11*	10*
1939	2,730,000	3,550,000	—*	3
1940	2,856,000	3,730,000	5	5
1941	2,947,000	3,390,000	3	5
1942	2,815,000	3,800,000	4*	3*
1943	2,720,000	3,650,000	4*	4*
1944	2,351,000	3,250,000	14*	11*
1945	2,455,000	3,480,000	4	7
1946	3,136,000	4,296,000	28	23
1947	3,565,000	4,753,000	14	11
1948	4,010,000	5,141,000	12	8
1949	4,257,000	5,529,000	6	8
1950	4,542,000	5,937,000	7	7

* Decrease.

above the prewar standard of 1929. The 1950 per capita apparent consumption of all kinds of paper and paperboard in the United States has been estimated by the American Paper and Pulp Association at 380 pounds or nearly 49 pounds higher than in 1949. On the basis of this estimate, consumption of newsprint represented about 20½ per cent of the total.

In view of considerable interest in newsprint usage data on a geographical basis there is reproduced below a summarization of consumption by regions as reported in a recent issue of *Editor & Publisher*, based on the 1947 Census of Manufactures report covering the newspaper publishing industry. The 10,282 papers—dailies, weeklies, etc.—included in the survey used a total of 4,163,000 tons of newsprint paper in 1947 or 87½ per cent of the estimated total consumption in that year.

NEWSPRINT CONSUMPTION BY REGIONS—1947
(Newspapers Only))

	Short Tons	% of Total
New England	284,000	6.8
Middle Atlantic	1,319,000	31.7
East North Central	956,000	23.0
West North Central	361,000	8.7
South Atlantic	392,000	9.4
East South Central	140,000	3.3
West South Central	240,000	5.8
Mountain	75,000	1.8
Pacific	396,000	9.5
Total	4,163,000	100.0

Newspaper Sizes

Both daily and Sunday newspapers in the United States were larger in size in 1950 than in any preceding year on record although the increase over 1949 was at a somewhat lower ratio than the expansion in volume of advertising linage. Thus it would appear that the postwar tendency toward larger advertising content of newspapers—interrupted in 1949—was again resumed.

Leading Sunday newspapers averaged 112 pages in 1950 compared with 107 pages in 1949, 102 pages in 1948 and 111 pages in the hitherto peak year of 1926. Sunday newspaper sizes in 1950 compared with 1949 began and ended the year inauspiciously with a decrease of 2 pages in January and one of 5 pages in December, In between, however, increases ranging from a low of 5 pages in April and September to 9 pages in May and July were recorded so that the average for the year was 5 pages above that in 1949.

Leading dailies which had attained record size in 1949 advanced to even greater heights in 1950 with an average for the year of 36 pages which was 2 pages more than in 1949 and 4 pages more than in 1948.

The dailies' record was more consistent than that of Sunday newspapers with each month of 1950 showing an increase over the corresponding month of 1949. The previous high monthly average of 36 pages—first attained in October 1948 and equaled several times in 1949—was surpassed in seven months of 1950. The all-time high to date is the 40 page average during the month of November, 1950.

Newspaper Circulation

The postwar rise to ever higher levels in over-all newspaper circulations in the United States continued at a modest rate in 1950 although with somewhat greater vigor than in the preceding year. As in 1949, the dailies' circulation gains last year exceeded those of Sunday newspapers.

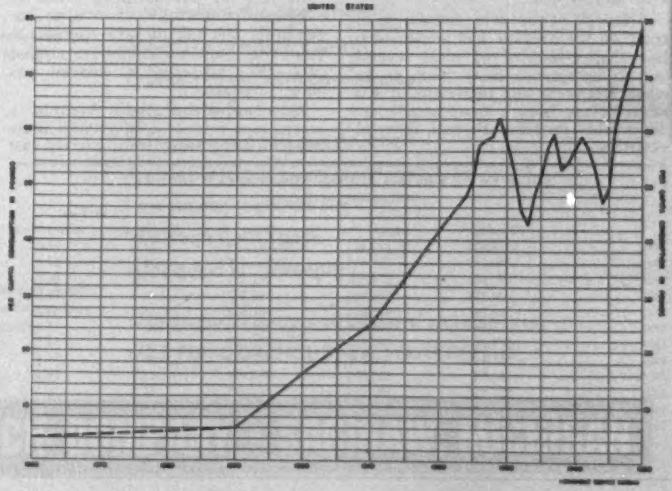
English-language newspaper circulation data for the year ending September 30, 1950 compiled by *Editor and Publisher* indicate a combined morning and evening daily total of 53,829,000 copies and 46,582,000 for Sunday papers with the increase over 1949 amounting to 983,000 copies or nearly 2 per cent for the former and 183,000 copies or not quite one-half of 1 per cent for the latter. Morning papers, recovering from the slight 1949 setback, recorded circulations of 21,266,000 copies in 1950 with an increase of 1.2 per cent over 1949 and 0.9 per cent over 1948. Evening newspapers' circulations amounted to 32,563,000 copies and were 2.3 per cent higher than in 1949 and 4.4 per cent above 1948.

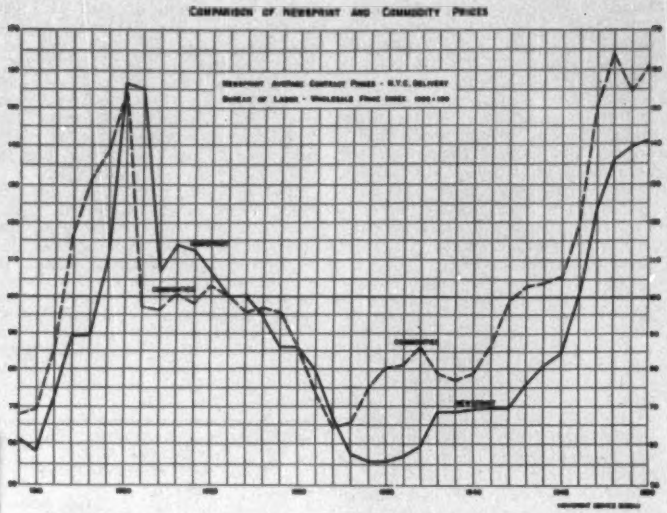
The following table shows the circulation of English-language newspapers in the United States during the preceding 15 years and indicates the changes that have occurred therein. It will be noted that the rise in Sunday newspaper circulations during this period outpaced that of the dailies. However, from 1948 through 1950, Sunday circulations were almost static while over-all daily circulations during this same period continued to rise moderately but steadily.

CIRCULATION OF ENGLISH LANGUAGE NEWSPAPERS—U. S.
Average for Twelve Months Ending September 30

Year	Daily	Sunday	Index Numbers 1937 = 100 Daily	Sunday
1950	53,829,000	46,582,000	130	150
1949	52,846,000	46,399,000	128	150
1948	52,235,000	46,308,000	126	150
1947	51,673,000	45,151,000	125	146
1946	50,928,000	43,661,000	123	141
1945	48,384,000	39,860,000	117	129
1944	45,955,000	37,946,000	111	123
1943	44,393,000	37,292,000	107	120
1942	43,375,000	35,293,000	105	114
1941	42,080,000	33,436,000	102	108
1940	41,132,000	32,371,000	99	105
1939	39,671,000	31,319,000	96	102
1938	39,572,000	30,481,000	96	98
1937	41,419,000	30,957,000	100	100
1936	40,292,000	29,962,000	97	97

The 1950 circulation figures given above cover a total of 1772 dailies—322 morning and 1450 evening papers—and 549 Sunday publications. In addition thereto there are a number of foreign-language newspapers and nu-





merous weekly, semi-weekly and other news publications which in the aggregate have a large distribution. For instance, the 1947 Census of Manufacturers report previously referred to lists 10,282 newspapers of all kinds with an aggregate circultaion per issue of 119,567,000 copies. The number of newspapers in that year compared with 10,176 in 1929 and the 1933 low of 6,884.

Newspaper publishing activities of the foregoing in 1947 resulted in receipts of $1,792,338,000 of which $599,925,000 represented circulation income while advertising accounted for $1,192,413,000. These receipts are defined as revenue from circulation and advertising after allowance for agency commissions, cash discounts, carrier boy profits, etc. The following tabulation shows circulation and advertising income in alternate years from 1919 to 1939 and in 1947.

Although newspapers' circulation income on the average has amounted to less than one-third of total revenue and in prosperous times tends to become relatively less important, it has, nevertheless, been a more steady and dependable producer thereof than advertising.

Advertising

In keeping with general business prosperity in the United States, advertising expenditures in 1950 were at the highest level on record. Preliminary estimates of their dollar volume made by the Central Research Department of McCann-Erickson, Inc. and published recently in *Printers' Ink* place the total at $5,684,700,000 or about 9 percent more than in 1949. This total is further broken down into national and local advertising volume of $3,281,000,000 for the former and $2,403,700,000 for the latter. The newspapers' share of the total was estimated at $2,059,000,000 of which $1,539,600,000 was of a local nature while $519,400,000 was in the national advertising classification.

Newspapers

In view of the declining trend in volume of newspaper advertising linage in the last half of 1949—counter to improving economic conditions at that time—the 1950 record by contrast was quite satisfactory.

As reported by Media Records, a record high total of 2,440,150,000 agate lines of advertising were carried last year in newspapers in 52 major cities of the United States. This was an increase of 6 per cent over the hitherto peak total in 1949 while the 1948 and 1947 volume was exceeded by 8 per cent and 21 per cent respectively. Also the rise from the 1942 wartime low amounted to 97 percent.

All classifications participated in the increase over 1949 as follows: retail, 58,753,000 lines or 4.4 percent; classified, 26,608,000 lines or 5.5 percent; general, 34,783,000 lines or 9.8 percent; automotive, 15,108,000 lines or 14.3 percent and financial, 2,929,000 lines or 11.6 percent. The following table of indexes of the various classifications—arranged in order of volume—of newspaper advertising linage shows the postwar record thereof in comparison with the prewar peak year of 1929.

INDEXES OF NEWSPAPER ADVERTISING LINAGE—52 U. S. CITIES
(By Classifications—1929 = 100)

	1950	1949	1948	1947	1946	1929
Retail	141	135	131	114	98	100
Classified	148	140	151	137	123	100
General	115	105	100	93	79	100
Automotive	80	70	55	46	28	100
Financial	38	34	35	33	36	100
Total	129	121	119	106	91	100

From the foregoing it can be seen that although total linage in 1950 was 29 percent higher than in 1929 increases over that year were not common to all classifications with those of lesser importance i. e. automotive and financial still below the earlier year's volume by 20 percent and 62 percent respectively.

Periodicals

The declining trend in the volume of magazine advertising linage which began in 1947 finally came to a halt last year. However, the 2 percent increase in 1950 compared with 1949 was not a particularly robust one. Moreover last year's volume still was 3 percent below 1948 and 9 percent less than in 1947.

Practically all of the improvement was concentrated in the last half of the year with five of the first six months having recorded decreases of a minor nature compared with the corresponding months of 1949. Thereafter the increases were consistent although they fluctuated within fairly wide limits, from a low of 3 per cent to a high of 12 percent.

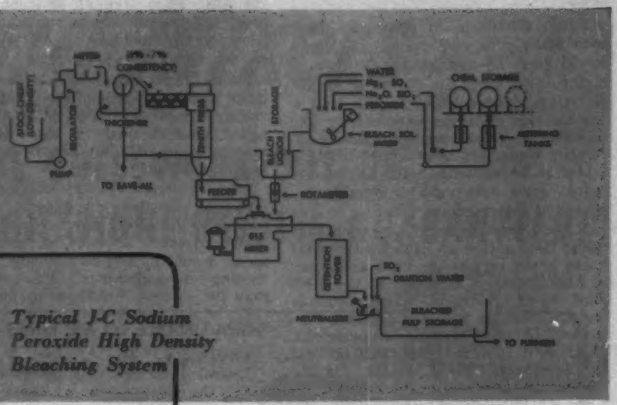
It is expected that barring the eruption of full-scale warfare the rising trend will continue for at least some time to come. Thus far there have been signs of only minor cutbacks by some advertisers, while on the other hand, many publications have reported booking a larger volume of advertising during the earlier months of 1951 than in the same period of last year. Furthermore, it is expected that expansion of production for defense will mean greater advertising of the institutional type with consequent benefit to magazines.

SOURCES OF UNITED STATES NEWSPAPERS' INCOME *
(Thousands of Dollars)

	Circulation	Advertising	Total	% of Total Circulation	% of Total Advertising
1947	$599,925	$1,192,413	$1,792,338	33.5	66.5
1939	306,192	539,495	845,687	36.2	63.8
1937	287,509	574,180	861,689	33.4	66.6
1935	260,224	500,023	760,247	34.2	65.8
1933	239,147	428,673	667,820	35.8	64.2
1931	261,569	624,954	886,523	29.5	70.5
1929	275,281	797,338	1,072,619	25.7	74.3
1927	252,811	724,837	977,648	25.9	74.1
1925	230,581	661,513	892,094	25.8	74.2
1923	222,559	580,938	803,497	27.7	72.3
1921	212,636	521,685	734,321	29.0	71.0
1919	192,819	373,502	566,321	34.0	66.0

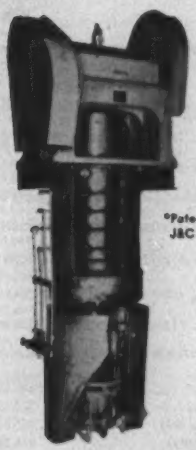
* From newspaper publishing activities only.

Jackson and Church — HIGH DENSITY SYSTEM



Typical J-C Sodium Peroxide High Density Bleaching System

USES *NO MORE* PEROXIDE TO BLEACH *HIGHER* TONNAGE TO *SAME* BRIGHTNESS OR *SAME* TONNAGE TO *HIGHER* BRIGHTNESS



J&C Zenith Press designed for use in high density systems, and in pulp washing, de-inking and storage at high density.

*Patents applied for J&C copyright

The J&C High Density System makes possible bleach consumption savings up to 25%.

HERE ARE ADDITIONAL ADVANTAGES:

- High density—40% or higher
- Continuous operation
- Fully automatic operation
- Selective pressure control
- Product of uniform consistency
- Moderate first cost
- Extremely rugged construction
- Available in corrosion resistant alloys
- Low power requirement
- Minimum floor space
- Aids good housekeeping

FOR ENGINEERING ASSISTANCE AND ACTUAL MILL PERFORMANCE DATA, WRITE DEPT. D.

JACKSON & CHURCH COMPANY · SAGINAW, MICHIGAN

Radio

Radio continues to confound those who some time ago predicted that it would soon be relegated to a role of minor importance in the field of advertising. It is true, of course, that it has suffered to some extent from the inroads of television particularly in certain areas, but over-all it still is a factor to be reckoned with. Moreover it may grow relatively stronger in the near and intermediate future.

It has been estimated by the National Association of Broadcasters that radio gross income in 1950 amounted to $448,200,000 and exceeded the 1949 total by 5.4 percent. This total is broken down as follows: national networks, $124,688,000; regional networks, $6,500,000; national spot, $120,660,000 and local retail, $196,350,000. Of the foregoing, only national networks' income declined from 1949 levels and that only by a little more than 3 percent.

Television

This newest vehicle for the dissemination of publicity, despite continuing restrictions, exhibited a spectacular rate of growth in the year 1950 and as a result attained the stature of a major medium for which a possible audience of more than 90,000,000 of this country's inhabitants is claimed.

The number of television receivers in existence at this time, it is stated, amounts to more than 10,000,000 — approximately three times as many as a year ago. It is also estimated that expenditures of the more than 4,500 advertisers, both local and national, via this medium amounted to about $80,000,000 in 1950 or more than twice as much as in 1949.

The impact of the expanding defense program will, in all likelihood, retard the future growth of television to a considerable degree. For instance, due to diversion of productive facilities and material shortages the manufacture of receivers in 1951 is expected to approximate only half the 1950 output. These factors will also militate against the development this year of color television and the establishment of additional stations even though the present official ban should be terminated.

Outlook

At this time it is impossible to foretell whether the current precarious world situation will become even graver, or how long it may last or the possible extent of our involvement. It can be expected, however, that the requirements of the expanding defense program are certain to result in progressively greater disruptions and dislocations in an economy already operating at near capacity levels and thus unable to carry this added burden without contraction of some phases of its activity.

It is generally agreed that the outlook for business hinges largely on whether the transition from peacetime to a semi-war economy can be accomplished in smooth fashion with work on defense orders providing employment, without any serious time-lag, to workers affected by cut-backs in civilian output. Such a transition was quite smoothly accomplished when this country entered World War II and again after that war so there is good reason to expect that like results will be achieved now.

On the basis of the foregoing assumption, business in general should continue at about last year's levels which to manufacturers of newsprint paper would appear to indicate a continuing demand for all the paper it may be possible for them to produce.

INDIA UNABLE TO AID MILLS

OTTAWA — The Madhya Pradesh (Central Provinces) Government has asked the Government of India for a loan of 35 million rupees for the completion of mills at Nepa and Ballarpur for the manufacture of newsprint and paper respectively, according to a report by Foreign Trade Service, Department of Trade and Commerce, Canadian Government, from New Delhi. Their request has been considered with similar requests from other state governments, the report continues, in the general review of the capital expenditure program.

With limited funds available, report states, no financial assistance could be given for these projects. It was first estimated that the projects would cost 20 million rupees but the cost is now estimated to be about 40 million rupees. The Madhya Pradesh Government has taken a share in the projects amounting to 6,500,000 rupees.

COMPARISON

PAPER AND BOARD: PRODUCTION, BY TYPE, 1950 and 1949

(Tons of 2,000 pounds)

Type of Paper	1950*	1949
ALL TYPES, TOTAL	24,295,137	20,327,222
PAPER, TOTAL	10,678,639	9,209,393
Newsprint	1,017,322	917,778
Groundwood printing and specialty paper, uncoated, total	694,146	674,592
Printing	488,583	484,782
Converting	174,337	161,840
Other	31,156	27,919
Printing and converting paper, paper-machine coated, total	1,014,051	911,878
Printing	939,920	....
Converting	74,131	....
Other	....	....
Book paper, uncoated, total	1,579,301	1,395,755
Printing	1,011,015	946,894
Converting	554,247	442,569
Other	14,139	12,462
Fine paper, total	1,224,452	1,014,954
Writing, total	964,326	806,133
Rag (including index)	149,082	119,819
Chemical wood pulp	814,744	686,314
Cover and text	65,030	62,732
Bristols (except rag index)	97,659	79,593
Thin	82,773	62,815
Other	17,164	....
Coarse paper, total	3,384,145	2,764,917
Glassine, greaseproof, and vegetable parchment	148,196	90,926
Wrapping, total	868,417	803,512
Unbleached kraft	479,899	398,193
Other	389,518	314,193
Bag, total	758,948	700,617
Unbleached kraft	695,024	651,710
Other	63,924	....
Shipping sack	668,453	503,741
Converting, total	940,031	757,247
Unbleached kraft	535,145	475,765
Other	404,986	281,269
Special industrial	314,448	250,621
Sanitary	1,108,388	1,006,168
Tissue	228,814	186,667
Absorbent	104,998	86,113
PAPERBOARD, TOTAL	10,800,175	8,992,964
Liners	3,739,037	3,192,262
Corrugating material	1,643,801	1,306,868
Container chip and filler board	320,331	244,924
Folding boxboard (for use in folding box plants only)	2,363,009	2,084,415
Set-up boxboard (for use in set-up box plants only)	636,568	617,249
Cardboard	77,974	83,204
All other paperboard	2,067,453	1,464,024
WET MACHINE BOARD, TOTAL	143,988	124,511
Shoe board	45,352	43,316
Binder board	41,403	36,477
Other	57,433	44,718
BUILDING MATERIALS MADE FROM PULP, TOTAL	2,672,308	2,000,354
Building paper	1,413,886	1,161,625
Building board	1,258,422	....

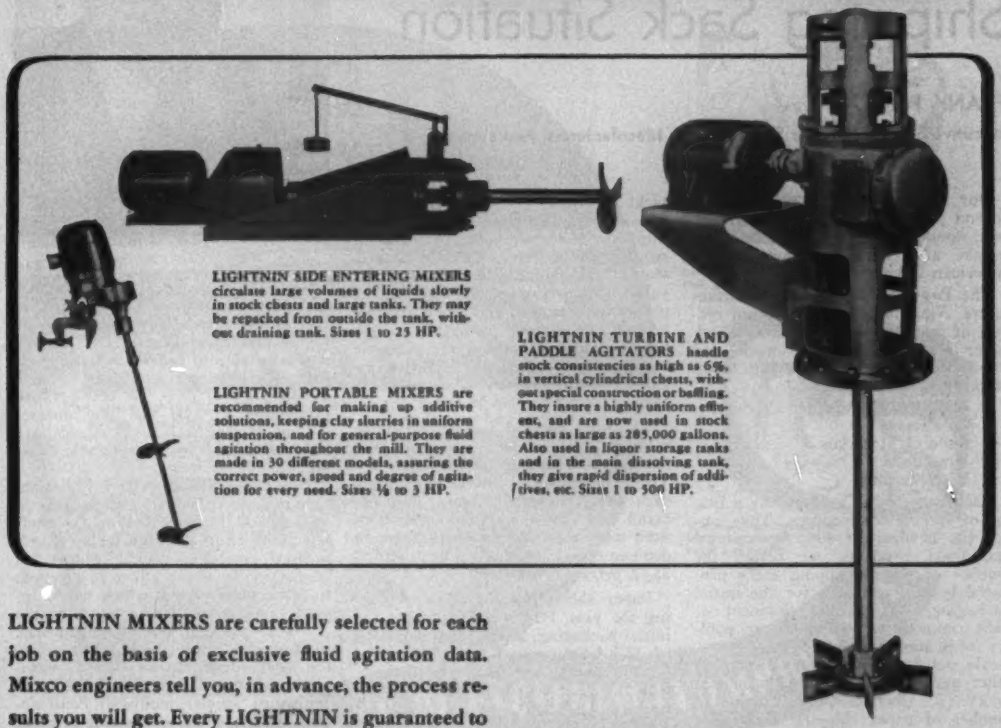
*Preliminary, all revised except December

Source Census.

Lightnin® Mixers

MIXCO® Engineered

TAKE THE GUESSWORK OUT OF FLUID AGITATION! RESULTS *GUARANTEED!*



LIGHTNIN SIDE ENTERING MIXERS circulate large volumes of liquids slowly in stock chests and large tanks. They may be repacked from outside the tank, without draining tank. Sizes 1 to 25 HP.

LIGHTNIN PORTABLE MIXERS are recommended for making up additive solutions, keeping clay slurries in uniform suspension, and for general-purpose fluid agitation throughout the mill. They are made in 30 different models, assuring the correct power, speed and degree of agitation for every need. Sizes ⅛ to 3 HP.

LIGHTNIN TURBINE AND PADDLE AGITATORS handle stock consistencies as high as 6%, in vertical cylindrical chests, without special construction or baffling. They insure a highly uniform effluent, and are now used in stock chests as large as 285,000 gallons. Also used in liquor storage tanks and in the main dissolving tank, they give rapid dispersion of additives, etc. Sizes 1 to 500 HP.

LIGHTNIN MIXERS are carefully selected for each job on the basis of exclusive fluid agitation data. Mixco engineers tell you, in advance, the process results you will get. Every LIGHTNIN is guaranteed to do the job for which it is recommended.

Let MIXCO agitation specialists show you how "engineered agitation" can help you get the process results you are after—without costly trial-and-error methods. For full information, write today briefly describing your needs.

makers of

Lightnin Mixers

A COMPLETE LINE . . . UNEXCELLED TECHNOLOGY

MIXING EQUIPMENT Co., Inc.

(MIXCO)

173 Mt. Read Blvd., Rochester 11, N.Y.

In Canada: William & J. G. Greey, Ltd., Toronto 1

Please send me the literature checked:

- ☐ B-76 Side Entering Mixers
- ☐ DH-50 Laboratory Mixers
- ☐ B-78 Top Entering Mixers (Propeller Type)
- ☐ B-36 Condensed Catalog showing complete line
- ☐ B-89 Top Entering Mixers (Turbine and Paddle Type)
- ☐ B-75 Portable Mixers (Electric and Air Driven)

Name_____

Title_____

Company_____

Address_____

City_____ Zone____ State_____

American Life and Industry Their Effect On The Shipping Sack Situation

FRANK POCTA
Executive Secretary, Paper Shipping Sack Manufacturers' Association

Our lives and our national welfare depend upon the products of agriculture, upon the chemicals, building materials and minerals produced by American industry.

The Paper Shipping Sack Manufacturers' Assn. maintains a constant record of end use products for which paper shipping sacks are made and these fall under the following broad categorical headings:

1. Agricultural and Food Products
2. Chemicals
3. Building Materials
4. Minerals
5. Miscellaneous

Each category is analyzed by a listing of specific commodities. Thus, under the heading of (1) Agricultural and Food Products, we record the number of paper shipping sacks produced by our members for the initial packaging, storage and shipment of such commodities as flour, sugar, poultry feeds, animal feeds, rice, peas, beans, meals, powdered milk, potatoes, and 60 other agricultural and food products; under (2) Chemicals, are shown the number of paper shipping sacks produced by members for the shipment of fertilizers, hydrated lime, limestone, synthetic rubber, salt, carbon black, calcium chloride, alum, soda ash, sodium nitrate, phosphate, insecticides, moulding compounds, pigments, ammonium nitrate, bicarbonate of soda, resins and at least 91 other important chemicals; under (3) Building Materials, are recorded the number of paper shipping sacks produced for Portland and high early strength cement, insulation, roofing compounds, plaster, asphalt and 18 other building materials; category (4) lists at least 55 minerals, among which are such items as abrasives, barytes, clay, talc, basic slag, sulphur, oil well drilling compounds, fullers earth, ground rock phosphate, etc.; and (5) miscellaneous, gives such items as binder twine, glues, pastes and about twenty other miscellaneous commodities for which paper shipping sacks are produced.

Every single order of paper shipping sacks produced is made to the specifications of individual packers and shippers. Minimum sack specifications required for a commodity to be packed, stored and shipped depend upon the value of the product, its hygroscopic properties, chemical and physical characteristics, shipping conditions, number of transfers, destination (domestic or export), warehousing facilities, atmospheric conditions and exposure to elements.

The total demand for multiwalls in the year 1950 amounted to well over two and one quarter billions of sacks. Total tonnage of all grades of shipping sack paper required to meet this demand was almost eight hundred thousand tons, representing an increase in demand over 1948 of 14.52 percent and 35.12 percent over 1949.

Paper shipping sacks supplied during the year 1950 were made for the initial packaging, storage and shipment of 32,364,448 tons of agricultural and food products; 32,830,670 tons of chemicals; 30,927,138 tons of building materials; 8,629,636 tons of minerals; 1,107,852 tons of miscellaneous products.

The entire production of our industry is devoted to supplying the demands of thousands of packers and shippers of American products, of which approximately 30.57 percent are for (1) agricultural and food products, (2) 31.01 percent are for chemicals, (3) 29.22 percent for building materials, (4) 8.15 percent for minerals, and (5) 1.05 percent for miscellaneous commodities.

I am taking the liberty of repeating a paragraph which recently appeared in an important industrial publication: "The shipping sack industry is a vital force in the packaging field. There is hardly a product you eat, wear or use that at some stage in processing has not traveled in shipping sacks. Multiwall paper sacks constitute about 60 percent of the total shipping sack industry volume, including cotton and burlap shipping sacks."

The facilities for the manufacture of multiwall paper shipping sacks in the United States are ample, numbering 58 producing plants. If U. S. mills had been able to provide a larger volume of shipping sack kraft tonnage during the year 1950, last year's record production of two and one quarter billions of multiwall sacks would have been surpassed by considerable margin.

The Paper Shipping Sack Manufacturers' Assn. considers the paramount activity of its members to be their unceasing effort to reach higher standards of protective packaging and has cooperated in every effort in research to accomplish results which would insure the continued confidence of the American packing and shipping world.

This association's technical committee in cooperation with U. S. Government agencies during World War II developed special multiwall constructions which could withstand complete submersion in water for twenty-four hours and keep dry such subsistence as flour, sugar, salt, beans, etc. Other specially constructed multiwalls protected and delivered such foods to U.S. Armed Forces and their Allies fighting in the far corners of the world.

Multiwall sacks have been called the "work horses" of the packaging field. But they have the distinction of providing more than strength. They are built to protect a commodity against the particular type of hazard that may prove injurious to the quality of the product they carry. Is the product hygroscopic? Is it subject to chemical reaction under certain conditions? Is it abrasive? Is it free flowing or dense? Must the product be protected against insects? Or does the product have to be protected from atmospheric changes, from rain, snow, heat or cold? Is it packed in molten state? Is the natural flavor or oil of the product to be sealed in? etc., etc. If

The slender filament of a light bulb exchanges darkness for useful light.

The wire in an ear aid transforms an abode of silence into a world of delight.

Wires in a heat thermostat make for automatic home comfort.

The winding-on operation consumes many hours of time and care, to the end that every wire among thousands may be flawless.

Intricate wiring in a modern battleship goes far to protect life and country.

The wires in a therapeutic lamp minister to human relief and health.

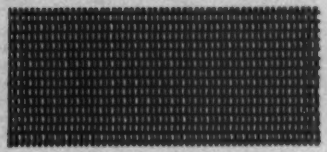
Every strand of wire cabled by Lindsay is processed with minute care ("head" of cabling machine shown).

Yes! A Wire CAN BE EXCEEDINGLY IMPORTANT

The total cannot be other than the sum of its parts. A wire cannot rise above the excellence of its individual strands. Lindsay refuses to "wind on" a wire unless every composite strand has survived the most exacting ordeal of laboratory and inspection. Each step which precedes and follows the winding on and weaving operations is subjected to tests just as conclusive and thorough.

THE LINDSAY WIRE WEAVING COMPANY

14001-14299 ASPINWALL AVENUE • CLEVELAND 10, OHIO



Lindsay **WIRES**

FOR PAPER MILLS

you were to study the many commodity variations for which paper shipping sacks are produced, your first remark might be that of amazement. But the success achieved by multiwall paper shipping sacks in protective packaging in domestic and export commerce, is far from being a coincidence. It is the result of persistent effort by multiwall engineers for many years in analyzing each packaging problem from every practical common sense angle and carefully working it out the hard way, with the help of packers and shippers, developing the particular type of multiwall construction best suited for an individual product from the standpoint of economy, quality product protection and simplicity in use. Add to this, the great strides in automatic weighing, packing and closing mechanisms introduced by our industry and you have still further testimony of packer and shipper confidence in multiwalls — the modern All-American heavy-duty champion of the packaging world.

The many contingencies that loom ahead make it difficult to prophesy the events of 1951 and how they may affect our industry. Production of the paper shipping sack industry is devoted entirely to the supply of protective packaging for shipment of hundreds of vital materials to essential American industries, to the people and to our fighting forces. The paper shipping sack industry is joined to the entire American economy and will be strongly affected by the reactions of that economy in the months and years ahead.

Whosoever can prophesy the future activity of the (1) agricultural and food industries, (2) chemical industry, (3) building materials industry, (4) minerals industry, can predict the future of the paper shipping sack industry. Our industry's welfare and their's are inseparable.

Casein Summary 1950

Harry D. Wilson
Manager, Casein Dept., Borden Co. Chemical Div.

During the early part of 1950, plentiful supplies of casein were available from the Argentine.

Casein users in the U.S.A., however, looked forward to lower prices as they believed domestic production during the flush would show a substantial increase over previous years and that European sources would ship a large tonnage of casein to the U.S.A. market. With this in mind, consumers generally over the first five months of the year continued to work with minimum inventories and bought for immediate consumption only. Even so, supply and demand were about evenly balanced, and from January to the end of May, the price of Argentine casein continued with minor variations at approximately 20 cents per pound, ex dock New York. Domestic material was not so plentiful as the Argentine's, but the price during this period did not exceed 24 cents per pound, f.o.b. creamery.

At the beginning of June, stocks of casein in this country were very light, and it was then apparent that domestic production would be no greater than in 1949.

With the outbreak of hostilities in Korea a few days later, casein users, mindful of previous experiences, became anxious to build up their inventories as a protection against any future contingency. A sharp wave of

EXPORTS FROM THE ARGENTINE
METRIC TONS—2204 LBS.
1950

	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Total
Austria	91	..	..	..	..	..	..	..	..	..	..	101	192
Belgium	42	3	2	35	..	..	..	15	10	60	65	10	244
Brazil	..	..	..	..	5	10	50	155	33	35	32	57	377
Chile	..	..	..	..	..	..	..	19	..	..	4	1	24
Columbia	..	5	..	..	7	..	..	..	..	11	..	..	23
England	230	550	450	325	470	65	142	20	153	44	350	190	2989
Finland	205	..	..	..	..	..	..	..	..	..	8	..	213
Germany	..	..	100	115	..	10	17	24	135	113	164	28	726
Greece	..	25	..	..	..	..	..	..	..	..	..	..	25
Holland	..	..	109	..	200	..	..	..	..	..	..	80	389
India	..	..	..	..	..	27	..	108	..	10	1	23	169
Indo China	..	..	2	..	..	..	..	..	..	..	..	..	2
Italy	..	25	31	25	..	25	..	8	..	49	157	188	508
Japan	..	..	..	..	..	..	..	..	..	..	62	112	174
Mexico	7	7	20	10	10	52	8	20	47	2	..	5	188
Miscl.	2	..	..	13	..	..	2	..	..	..	..	9	26
Norway	..	10	3	37	..	..	119	..	..	18	..	11	196
Palestine	..	..	..	..	..	..	..	2	..	..	..	6	8
Peru	..	..	..	..	..	..	..	2	3	..	1	3	9
Trinidad	..	..	..	..	..	20	..	..	..	..	..	..	20
Spain	333	149	..	..	..	22	6	..	..	..	..	..	530
Sweden	130	27	55	124	70	250	295	130	..	63	120	5	1259
Switzerland	22	..	..	..	..	10	..	..	..	..	10	..	42
So. Africa	..	..	..	..	..	..	10	10	..	..	..	..	20
United States	1626	1185	2115	1851	1289	1194	1625	2146	1973	1141	1238	1901	19284
Venezuela	..	43	12	73	..	..	25	..	30	..	10	..	195
	3498	2033	2899	2608	2051	1685	2299	2659	2404	1546	2222	2730	27834

DRY CASEIN PRODUCTION U. S. A.
Short Tons—2,000 Lbs.

	1948	1949	1950
Jan.	375	461	630
Feb.	405	721	550
March	490	905½	750
April	712½	1195	1070
May	1083	1576½	1175
June	1012½	1269	1300
July	608	708	740
August	426½	573½	750
Sept.	412½	423	875
Oct.	550	403½	700
Nov.	362½	490	525
Dec.	307½	681	510
	6739	9239	9575

ARGENTINE EXPORTS TO U. S. A.
Metric Tons—2204 Lbs.

	1948	1949	1950
Jan.	1655	282	1626
Feb.	2202	346	1185
March	379	463	2115
April	1439	446	1851
May	1351	543	1289
June	2068	552	1194
July	1186	1136	1625
August	947	941	2146
Sept.	1809	2181	1973
Oct.	997	2154	1141
Nov.	793	1594	1238
Dec.	1593	1481	1901
	15599	12519	19284

TOTAL ARGENTINE EXPORTS
Metric Tons—2204 Lbs.

	1948	1949	1950
Jan.	2376	1243	2698
Feb.	2998	804	2033
March	2122	2472	2899
April	2808	1567	2608
May	2961	1553	2051
June	3196	1141	1685
July	2588	1967	2299
August	2128	1981	2659
Sept.	1508	3144	2404
Oct.	2405	2535	1546
Nov.	1261	1696	2222
Dec.	3472	2891	2730
	29823	23994	27834

buying ensued, and as this coincided with the winter season in the Argentine when casein production is low, a rapid increase in price resulted. By the end of July, Argentine casein was being sold at 26 cents per pound, ex dock New York. A steady demand continued thereafter, and the Argentine producer took advantage of the intense buying interest. The price steadily mounted and, by the end of December, Argentine casein was being bought freely at 40 cents per pound, ex dock New York.

The total domestic production of casein during the year amounted to only 20,000,000 pounds, which was inadequate to supply the requirements of consumers who require this grade of material. From a low of 22 cents f.o.b. creamery in January, the price rose to 44 cents per pound at the end of December.

At the present time, world consumption of casein is at an all-time high and every indication is that it will continue at its present volume. While hopes are entertained that domestic production in the U.S.A. will be stimulated by today's high price, the continuing demand for edible milk products, especially skim-milk powder, will in all probability prevent the diversion of any important volume of milk to the manufacture of industrial casein.

It is expected, however, that supplies of French and other European caseins in the U.S.A. market will be more plentiful during the summer of 1951. With the present high consumption in the U.S.A. estimated at 70,000,000 pounds annually, the Argentine continues to be an indispensable source of supply and the most important factor in the casein picture at the present time. Argentine suppliers have been selling their casein as it comes from the factory and there has been no build up of any substantial inventory to offset the seasonal decline in production which occurs in March and continues to October. Thus there appears to be little hope of excess supplies for many months ahead.

Import Problems 1950

Warren Bullock

Manager, Import Committee American Paper Industry

Some striking developments in the manufacture of new papers and unusual uses for recognized grades have been disclosed during the past year by problems which have been presented to the Import Committee of the American Paper Industry by Customs officials.

Scientific research in the paper field has been aimed at finding new uses for paper, and some of the cases called to the attention of the Import Committee during the past year may be of considerable interest, even though they may involve large tonnages of any of the new types of material.

Recently, for instance, there was an importation of a sheet for use as a substitute for zinc or aluminum lithographic plates. There has been considerable domestic experimentation along this line, but an imported product consists of two sheets of high grade special paper, with an inner aluminum foil lamination.

Recent importations of material classified as coated paperboard were entered at values ranging from $3 to $10 per pound. Investigation showed that this paperboard was in fact a special type used for X-Ray intensifying screens.

In the coarse product field, Guatemala is shipping some 40 tons per month of a paperboard made from the waste fibre of citronella. A similar problem is the prospective importation of paperboard made from bagasse, the waste of sugar cane. This material has been widely used for wallboard, but not generally for boxboard. The issue in these cases is whether such material can properly be imported at the rate for strawboard, which is lower than that for other paperboards.

Glassine is usually considered to be a wrapping material, but new types have been developed in Europe for use as a base for carbon paper, and for sensitizing for blue print photographic paper.

Still another new product is a sheet composed of one third rubber and two thirds kraft pulp, supposedly for use as a base for artificial leather.

A proposal to use titanium dioxide in newsprint paper is not likely to prove practicable owing to the heavy cost of such a hopped-up newsprint paper.

The Import Committee's experience in classification of various papers is not always confined to Customs problems. United States agents frequently call on the Import Committee for help. A typical instance was an effort to identify unusual paper used for wrapping smuggled narcotics.

In listing these problems in the import field there is no suggestion that the production of such items is a result of foreign experimentation alone. Domestic manufacturers may have gone further than foreign producers in developing papers similar to those listed, but the fact that there are such offerings is an indication that European experts are making every effort to invade the field of unusual papers, as well as the market for basic grades.

These new developments in the import field are merely incidental to the Committee's regular work in preventing misclassification and undervaluation of basic paper grades. During the year 1950 there were about fifty border-line classification issues which might easily set important precedents, and there were nearly 250 separate actions in the United States Customs Court in which importers sought to overturn rulings by Customers officials. In all of these cases the Import Committee has worked closely with the Government in its efforts to sustain the rulings of administrative officials, in many cases providing witnesses from the paper industry qualified to testify on the questions at issue.

Large imports of imported paper napkins, serviettes and doilies are involved in these court cases, as well as heavy shipments of converter rolls of toilet paper. The volume of these imports is so large that just one of the 250 cases covered the classification of seven carloads of toilet paper. Customs officials have held these types of merchandise to be dutiable as manufactures of paper, but the importers are claiming the lower rate provided for paper cut into shapes.

Another series of cases involves efforts to import papers with an excessive amount of ash, too much sulphite, and hard sized paper as duty free standard newsprint. In these cases the Customs officials classified the papers as dutiable printing.

There have been repeated attempts to secure admission at the rate for printing paper of high grade papers which, in the opinion of the officials, should be dutiable at the higher rate for writing paper.

The Paper Industry and Freedom of Enterprise

Dr. Louis T. Stevenson

Economist, American Paper and Pulp Association

It would be difficult indeed, if not impossible in a brief space, to present adequately the service that the paper industry renders the country. The use of paper and paper products is of course essential to the functioning of our American system of freedom of enterprise.

Paper is not only printing and writing paper, it is the basic commodity without which no person, no business, no government can exist in any mode remotely resembling what we know as modern civilization. It is the only commodity without which every commercial enterprise, every educational institution and every government function would immediately cease.

Paper is money, postage stamps, letters, railroad tickets, construction blueprints, law books, bills of lading, electrical insulation, government orders, business records, food packaging, shipping containers, grocery bags, newspapers and magazines. It is building material, navigational charts, towels, telegrams, pictures, checks, lamp shades, calendars, telephone directories, stocks, bonds, contracts. It is a thousand other things so omnipresent and so essential that they are completely taken for granted.

In other words, the availability of paper in great variety, in large quantities every day, under any and all circumstances, in peace or in war, in boom or in depression, is an absolute necessity to this country. Its essentiality to any country is in direct proportion to the state of civilization and industrialization of that country.*

But beyond all this, it is clear to one who stops to consider, that a large volume of paper and board is needed for the functioning of the freedom of enterprise which is the foundation of the well-being of our country. Let us trace the relation of paper to the operation of this system.

The United States market is a free market for persons located in this country. Any one who has what he thinks is a desirable product or commodity is free to enter the market as a supplier. That is the fundamental fact about the system. What does he do when he starts to introduce his product? First he studies his market and decides on his selling campaign. Next he picks a name for the product.

He then decides how he will package the product. Packaging in this country takes a lot of paper and board. About 14,500,000 tons of packaging papers were consumed in 1950.

The next step will be to advertise the product by brand name. Identifying the brand name with the product is part of the function of packaging, and advertising's function is to make known the brand name and to promote the sale of the product by brand name. All this takes a lot more paper.

The selling organization requires paper for correspondence, for orders, report forms, record keeping and for selling aids such as catalogs, brochures, direct by mail advertising, dealer aids, etc., etc.

In conducting his business he will draw upon such services as banking and financing, insurance and many others, all of which are dependent upon the use of paper for proper functioning.

The paper consumed in advertising and selling and carrying on business in 1950 amounted to 10,400,000 tons.

The volume of paper consumed per capita may be considered as a measure of the operation of freedom of enterprise. Freedom of enterprise requires the constant development of new ideas (new products), to compete with established products and ideas. Thus, millions of ideas are expressed in new products and new applications for old products in the functioning of the system.

Contrast this with the totalitarian system which requires essentially the expression of but one idea, that of the "party line" or state policy. The consumer has little choice because there is the state monopoly's product or nothing. "Take it or leave it" is the policy in contrast with the "customer is king" in the American system.

With this in mind, it will be interesting to note the per capita consumption of paper and board of several free enterprise countries as compared with per capita of certain totalitarian countries:

United States	380 lbs.
Canada, Newfoundland.	256 lbs.
Russia	10 lbs.
Poland	22 lbs.
Spain	15 lbs.

Of course, the per capita consumption of paper also reflects the relative standard of life. But this means that a high standard has a high volume of goods and services per capita and vice versa, a low standard has a low volume of gods per capita. The fact remains that the United States has the highest per capita consumption of paper and board in the world. It combines the highest volume of goods and services consumed per capita with the highest per capita consumption of paper and board.

The United States freedom of enterprise system required 28,900,000 tons of paper and board to function in 1950. To reach this volume required the importation of a large tonnage of newsprint and wood pulp as well as large volumes of pulpwood and other paper making materials. These purchases abroad furnish good American dollars to the supplying countries.

Canada, our good neighbor, received over $600,000,000 in 1950 for her sale

* R. E. Canfield in THINK Magazine.

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of paper and pulp to the United States, and this made the Canadian paper and pulp industry the first industry in Canada, both in production and in exports.

Scandinavian countries also regard the United States market for wood pulp as a regular outlet for wood pulp. The paper and pulp market in the United States thus promotes international exchanges. In fact, it does so to the extent that imports to this market create a greater amount of exchange than does the coffee or sugar imports.

In spite of these large imports of paper and pulp, the United States produces the largest volume of paper and pulp of any country in the world. For example, the United States made almost four times the paper and two times the pulp that was made in Canada in 1950.

Not only does the United States industry rank highest in the world paper and pulp industry, but it ranks sixth among the industrial giants of this country, following only the monster motor vehicles and parts, meat packing, wholesale, steel works and rolling mills, petroleum refining, and cotton broad woven fabrics industries, in value of product, according to the U. S. Bureau of the Census.

Conclusion

The paper industry in the United States and the freedom of enterprise system are absolutely interdependent. The paper industry as it exists in the United States can not be expected to operate at anywhere near its present level if freedom of enterprise dies.

Freedom of enterprise in the United States can not be made effective without the paper industry. Operating together these two have built the highest standard of living in the world.

Criteria For Pulp Allocations

L. K. Larson

Sales Manager, Weyerhaeuser Timber Co. Pulp Division, N. Y.

While it is dangerous to ignore the lessons of the last war in preparing for the next, it is equally dangerous to assume that the production and distribution controls employed during World War II will serve, without modification and without regard to surrounding conditions and circumstances, to meet the problems of the present emergency.

A program of pulp allocations admirably met the needs of the situation during World War II. Under present conditions, however, the practicability of pulp allocations as a control device is open to serious question.

Justification for Pulp Allocation

A combination of three extraordinary circumstances created the need and dictated the course of the wartime pulp allocation program:

1. Abnormal curtailment of pulp supply, due to the stoppage of European imports.

2. Abnormal pulp demands directly attributable to the war program.

3. The need for maintaining non-integrated paper and board production in order to insure a balanced paper and board output for the satisfaction of defense requirements.

Prewar, imports of pulp from Europe constituted 57 percent of our market pulp supply. The loss of these imports created serious problems that called for drastic remedies.

During World War II, three basic war-time programs of the United States government created heavy requirements of wood pulp over and above essential civilian demand:

1. The War Production Program
2. The Lend-Lease Program
3. The Good Neighbor Program

To sustain these programs, it was necessary for a few pulp producers to divert very large tonages of wood pulp from their regular customers, many of whom had already been adversely affected by a curtailment of pulp imports.

It was the judgment of the government that the full burden of these three basic war programs should not be borne alone by those whose normal pulp supply, by virtue of circumstances, had to be diverted to direct war purposes. The principle of sharing the war burden was adopted and found expression in a program of pulp allocations.

Pulp Supply

Prior to World War II, 83 percent of the world's pulp exports originated in Europe. A direct cause of United States pulp shortages in World War II was the complete curtailment of European exports. Prewar, the United States derived 57 percent of its market pulp requirements from Europe. During the war it received no pulp from that source.

In the present emergency there has been no curtailment of international pulp movements; on the contrary, international pulp trade during 1950 was at a postwar peak. Further, the United States has lost *none* of its supply sources up to the present time, and, short of war, there is no reason to expect that any supply source will be cut off from this market. Market pulp supply in 1950 reached a postwar peak in all major world markets. Domestic supply in 1950 exceeded the 1949 supply by 37 percent.

Whereas, prewar, the United States depended upon Europe for 57 percent of her market pulp supply, European imports in the last three years have amounted to only 19 percent of our total market pulp supply. The problem created by a stoppage of European imports, even in the event of a new world war, would, therefore, be of one-third the magnitude of the World War II problem, due to a marked trend in recent years toward North American self-sufficiency.

Pulp Demand

During World War II, the War Production Program required large quantities of wood pulp for nitration. Published estimates indicate that at one point this single defense requirement absorbed over 25 percent of the entire available dissolving pulp supply, a supply materially augmented at the time by a diversion of capacity from the production of paper grades of wood pulp to the production of dissolving grades. The allocation program, by spreading the burden of this nitration requirement, helped to maintain the essential production of those consumers to whom this pulp would normally have moved.

Nitration requirements, short of full scale war, are bound to be materially less than in World War II. Requirements in World War II continued heavy because smokeless powder was being continuously expended; in the current phase of the present emergency, on the other hand, the problem is primarily one of insuring adequate capacity and inventories.

Not only will nitration pulp requirements be substantially less, at least for the present, than they were in World War II, but these requirements will be

* Presented at Annual Meeting of the Association of Pulp Consumers, February 19, 1951 at Waldorf-Astoria, New York City.

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applied against a sharply expanded dissolving pulp supply.

While the problems created by nitration requirements in the immediate emergency will probably be of much lesser magnitude than in World War II, it is conceivable that these demands for nitration pulp could, nevertheless, seriously discommode the current distribution of dissolving pulp grades. The currently available supply of dissolving pulp is being fully absorbed in the production of rayon and other important products. Any diversion of dissolving pulp supply from present uses to nitration is bound, therefore, to create new problems. These problems can be solved either by an expansion of dissolving pulp capacity and/or by limited controls designed to insure the most effective distribution and use of the available supply of dissolving pulp.

During World War II, with Scandinavian and Central European pulp unavailable, the obligation to supply the pulp and paper needs of all of the Allied Nations, under the Lend-Lease Program, and of neighboring countries, under the Good Neighbor Program, fell squarely on North America. It was our government's responsibility to make certain, through pulp allocations, that the basic requirements of its friends and Allies were met.

Since the war, Europe has not only been self-sufficient in the matter of pulp supply, but has had substantial exportable surpluses. Europe's present pulp supply sources, short of war, are secure, and any additional requirements for specific grades or types of pulp needed to insure her defense or her further economic progress must certainly be modest in comparison with war-time lend-lease requirements.

It should be possible to arrange for the satisfaction of Europe's essential pulp demands without complete disruption of world trade in wood pulp.

Practicability of Pulp Allocations

Imports currently constitute 55 percent of our total United States market pulp supply and domestic sales 45 percent.

The success of an allocation program must hinge on the feasibility of the government's controlling that portion of our supply that is currently being imported (55 percent), without adversely affecting the volume of imports.

During World War II, the government *did* succeed in directing the distribution of imported pulp without causing a diversion of foreign supply. The success of the war-time pulp allocation program was attributable to the fact that surrounding conditions and circumstances during the war period combined in such a way as to make such a program completely feasible. These surrounding conditions were as follows:

1. Imports of market pulp during the war period were available from but a single source — namely, Canada.

2. By the time the general allocation of wood pulp was undertaken during the last war, it was clearly apparent that a coordinated program for the distribution of North American wood pulp was essential to the success of our joint war effort.

3. Because of the war, Canada had only one substantial available outlet for her market pulp — namely, the United States.

4. Domestic price controls, during World War II, did not operate as a deterrent to the sale of Canadian wood pulp in this market — again because Canada at that time had only one substantial available outlet for her pulp.

None of the above conditions prevail at the moment:

1. Imports of market pulp are currently available from *all* normal supply sources. The government's objective should be to maximize the supply of market pulp from all sources. Pulp allocations would defeat that end if they were to result in a diversion of the foreign pulp supply.

2. Participation on the part of our major foreign sources of supply in a coordinated plan, worked out at the proper governmental levels, is essential to the success of a domestic wood pulp allocation program. No arrangements for such a plan have as yet appeared.

3. The foreign pulp industries currently have access to many substantial available outlets besides the United States. A domestic program of pulp allocation undertaken without their cooperation would probably result in a diversion of foreign pulp to other markets.

4. Since sales of wood pulp currently command lower prices in the United States market than in other available world markets, the economic incentive for a diversion of foreign pulp supply already exists—an attempt by our government to allocate imports without the assured cooperation of our major foreign supply sources would aggravate the incentive for diversion.

The probabilities are, therefore, that an attempt to allocate wood pulp under current conditions would result in a serious diversion of market pulp to other markets.

There is another consideration that makes the problem of pulp allocations infinitely more difficult today than it was during World War II. During World War II all pulp, domestic and foreign, was sold in this market at the established uniform price ceilings; there was no question of price to contend with, therefore, as distribution schedules were shuffled and reshuffled by the allocating authorities.

Today the spread in the contract range of bleached sulphite prices, domestic and foreign, under the newly established general freeze, is approximately $50 a ton. Redirection of the normal flow of foreign and domestic wood pulp in this market could only result in a series of unjustified economic losses and unmerited economic gains, with the possibility of law suits involving producers, consumers and even the government.

The basic mobilization problem of the pulp and paper industry today is one of insuring a productive capacity which will be adequate, both in quantity and quality, to meet anticipated civilian and defense requirements. Distribution and price controls should be fashioned with this basic objective in view. If this phase of the mobilization program is successful, then the problem of a balanced production of the end products of this industry to meet the diversified needs of a defense economy will be materially simplified.

Operations of pulp consuming industries in recent months have been at virtual capacity. Pulp supply, over-all, has been in virtual balance with requirements for consumption. Pulp shortages, to the extent that they exist, are for the most part either shortages of supply for inventory or isolated instances of individual company shortages. Under normal circumstances, purchasers must assume the economic consequences of their own procurement policies. Where defense requirements and the national interest are involved, however, the NPA should lend assistance to individual companies whose fibre supply is inadequate to enable them to meet specific and essential demands imposed on them by the defense effort. Failure to take timely action to forestall the development of individual problems of this type could result in premature pressures for the introduction of a system of pulp allocations at a time when conditions would not permit its effective operation. The power to expedite war production includes the power to direct deliveries of raw materials to the extent necessary to facilitate defense production. To initiate pulp allocations in order to solve the personal raw material problems of a few individual consumers would go far beyond the bounds of necessity, and create new problems far greater in magnitude than those we now have or are likely to have in an unrestricted market.

In conclusion, then, the feasibility of pulp allocations must always be considered in the light of surrounding conditions at the time. Under conditions existing today, allocations would appear to be not only unnecessary and impractical, but even dangerous. It is conceivable that in the course of the next six months, conditions could arise that might make pulp allocations imperative. It is equally conceivable, however, that in the course of the next six months, market pressures in this industry could relax to such an extent as to mock the thought of allocation.

In view of the dangers inherent in any current effort to allocate wood pulp and in view of the great uncertainties of the future, the soundest official distribution policy, in my judgment, would be to make haste slowly,

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utilizing the type of conservation-limitation orders used so effectively during World War II, and improvising limited controls where necessary in order to keep specific situations from festering.

The success of such a policy, however, would depend on the ability of the industry to cooperate intelligently within itself and with the industry divisions of the governmental agencies to solve the various marginal dislocations and meet the extra demands generated by the defense program in this initial phase. If we fail in this we can easily invite the imposition of more far-reaching controls than the real conditions require, under circumstances which would seriously impair their chances of success.

How To Postpone Pulp Allocations*

Robert H. Evans

President Elect, Association of Pulp Consumers

By definition our membership consists of paper mills that purchase the larger part of their wood pulp requirements in the open market. In recent years, we have been somewhat put on the defensive because of this fact. There is certainly no discredit attached to being a converter mill. Most of us are that through force of circumstance: through size, the exigencies of location, the blending of many different pulps, or the manufacture of small scale specialized papers. Actually, the converter mill should be as proud of his position as any other company in this industry. Through our purchases of pulp, we support mighty market pulp enterprises in the United States, Canada and Scandinavia. Without mills like Rayonier, Soundview and Weyerhaeuser which in peacetime depend upon the sale of market pulp to non-integrated consumers, the Government would have been hard put to find enough raw material for the smokeless powder needed to win World War II.

The converter mill often manufactures specialty papers not available from any other source. Many of these papers, while small in scale in comparison with the volume grades, were essential to the conduct of the last war and are equally vital today.

The converter mill represents small business in its finest sense, not seeking special or unwarranted advantages but demanding recognition of its right to live on the basis of its legitimate contribution to the national economy whether in peace, mobilization or war.

The converter mill is also distinguished by the fact that in many cases it is a one-man or a two-man show. These men carry great burdens of responsibility, make decisions for which they are often financially accountable, and have been the driving force and intelligence in this Association. These men, many of them here today, have had to learn how to turn on a dime since 1940 in the face of war, price control, allocation, post-war

inflation, the 1949 inventory liquidation, and now a new war and a new inflation. Having lived by our wits for ten years, let us hope that we have so sharpened them and so profited by our experiences that we can cope with the problems facing us today. Like every American, whether individual or corporation, the converter is called upon to contribute his maximum to the mobilization effort. As yet, we do not know the full extent or import of this contribution, but it goes without saying that we all stand ready to make it. Aside from this—which is really no problem but our simple duty—the converter has the problem of contending with the scarcity of raw materials, essential equipment and labor. Since our Association is concerned primarily with our basic raw material, wood pulp, I want to talk on that subject for it is here that we have our most critical problem and where we can react with the greatest intelligence or lack of intelligence, as the case may be.

It goes without saying that we favor an expansion of facilities to produce market wood pulp because we know that entirely apart from the market wood pulp shortage that already exists, the country is faced with a nitrating pulp program of undetermined but potentially vast proportions. The National Production Authority has before it numerous applications for the construction of new and the expansion of old facilities for pulp and paper and to the extent that these will contribute to an increase in the supply of market wood pulp we certainly hope that they will be granted and that they will be further implemented by such priority assistance for critical materials as may be necessary to insure their speedy completion.

We know, however, that even with the most favorable action on the part of Washington, these facilities will take 18 months to two years before they accomplish much to relieve the supply of market pulp or nitrating pulp. In the meantime, the pulp shortage continues and intensifies; so it becomes a question of what we can do to help ourselves in the meantime.

It is awfully easy to adopt a "do nothing" attitude and either hope for the best or look to Washington to intervene in the situation. The fact is, however, that if the paper business continues at the present level, all our waiting and hoping is not going to overcome the substantial gap between market pulp supply and demand. Our secretary has prepared figures to show that during the year 1951 we will suffer a deficiency of 400,000 tons in the supply of market pulp, or in round figures approximately 15 percent of the 1950 rate of consumption. Since we have no inventories, this means that we are faced with a reduction of market pulp consumption of approximately the same percentage in 1951. Unless we do something about it, we will have 15 percent less running time on our paper machines in 1951, which will be bad for our customers, our employes, and our earnings.

In the face of this situation, most of you are attempting to secure additional secondary fiber to offset the shortage of pulp. In spite of which it is safe to assume that the converter

* Presented before Assn. of Pulp Consumers Annual Luncheon, February 21, 1951 at Waldorf-Astoria, New York City.

mills are going to be short of fiber in 1951.

A disturbing factor of the situation is that the shortage differs in severity from one grade to another and from one customer to another; thus while practically every member of our Association will suffer some fiber deficiency in 1951, certain mills will be much more seriously affected than others, either because of the particular grade of wood pulp they use, or because of particular factors relating to their sources of supply. I am thinking in particular of the serious shortage of market unbleached kraft and the special problems created by changes in the distribution pattern of certain market pulp mills in both the United States and Canada.

Under these conditions, it is not really surprising that some people should recall the days of World War II when consumers had all their problems deposited in Washington's capacious lap and simply waited to see what deliveries of wood pulp would be allocated to them, how much they would be allowed to consume, and for what end uses. With the passing of the years and in the face of some difficult problems which confront individual mills, it is not too hard to view pulp allocation through a rather rosy haze of nostalgia.

I think, however, that Mr. Larson has demonstrated forcefully and convincingly that pulp allocation faces many hazards today so different from World War II conditions as to jeopardize its chances of success. As an old China hand in the matter of pulp allocation, I subscribe completely to Mr. Larson's argument. In the course of time and under stresses much greater than those that now exist, we may be forced into a program of pulp allocation. Under present conditions, I cannot help thinking that it is performing a quadruple amputation because the patient has a slight cold. Once we are embarked on a program of pulp allocation, it is a process rather difficult to stop. As we sit here today, nobody knows exactly whether we are going to be in a war in ten minutes or ten years. Some of our leaders have predicted that we may live in a state of mobilization for ten or twenty years. When we go into wood pulp allocation, we are putting on a strait jacket for whatever period the emergency lasts. You will recall that in the first few months of allocation in World War II, there were no restrictions on consumption or control over end use because the large inventories with which we entered the war permitted us to get by with a simple reshuffling of the delivery schedules. It was not until sometime in 1943, as I recall, that we ran out of inventories and were forced to restrict consumption. It was at this point that end use and essentiality came into the picture, for it was decided that pulp should be allocated and consumed according to the relative importance of the end products. As one who was faced with the day to day problems of handling pulp allocation, I still feel that we had no alternative under the circumstances of that period. Nevertheless, determination of essentiality is not a simple problem and the consequences fell with dire effects on those non-integrated mills which produced so-called cultural papers.

If we go into a program of pulp allocation today, the same reasoning is likely to prevail, with the difference that we have no inventories and would have to go into full-fledged controls from the very start. Thereafter, allocation becomes such a simple and effective means of controlling the entire industry that it offers a field day for those interested in Government control of business. It can become, as it did in the last war, the means of deciding, not by the ordinary process of supply and demand, but by the determination of a few men in Washington, how many grocery bags the housewife shall have, how much wrapping paper industry shall have, how much printing paper publishers shall have; even such questions as whether we shall have facial tissues or paper napkins. If the emergency continues indefinitely without exploding into actual conflict, the industry men in Washington are going to get tired and go home. They may even make representations that there is no further need for pulp allocation. Again I want to testify from personal experience that in the third quarter of 1945 when Swedish pulp had already started to flood our markets, to the extent that some mills had to refuse delivery allocations from the War Production Board, it was not at all easy to get the allocation order M-93 repealed. There was no shortage of Government personnel willing and able to carry on the administration of this order, even if the rest of us thought it was time to leave. With all these thoughts in mind, I strongly recommend to both the industry and Government men here today that they stay clear of pulp allocation for as long as possible.

This is not to say that nothing should be done about the present situation. In addition to the expansion of market pulp capacity and the increased use of secondary fiber, I believe that certain steps can be taken which will postpone the necessity of pulp allocation for some time and possibly until the point where a change in business conditions or the completion of new capacity can forestall the necessity for allocation entirely.

The most obvious step to take at the present time is the reinstatement of the limitation orders of the type of L-120. If, as we claim, we are an essential industry facing critical shortages, it would seem to be only common sense to behave like other essential industries and take steps to conserve and stretch out the available supplies. A reduction of basis weights would in many sections of the paper industry permit either an increased yardage of paper from the same tonnage of pulp or alternatively the same yardage from a reduced tonnage. Some integrated mills might then be in a position to supply excess pulp production to the market and at the present prices they would have a strong incentive to do so. This one measure if properly applied should go far toward alleviating the situation in both pulp and paper. It might well be accompanied by a ban on excessive or unnecessary uses of paper such as other industries have accepted where critical materials are involved.

Secondly, if we are going to be 15 percent short of market pulp in 1951, is it not better to try to spread this shortage in such a way that no one consumer is too badly hurt? In this situation, no mill can be complacent about his own contract situation because no one knows where the lightning will strike next. I think the matter requires further study and more statistical information, but personally I would like to see the Government pass an order restricting each mill's market pulp consumption to let us say 90 percent of its 1950 usage. If this were accompanied by inventory restrictions and the proper cooperation between pulp producers, pulp consumers and the Government, it would have the effect of equalizing market wood pulp supply and demand in a manner which I consider far preferable to complete laissez-faire, or to the strangle hold of pulp allocation which a laissez-faire policy may produce. Since market pulp consumption is going to be reduced at least 10 percent anyway, and quite possibly 15 percent, this proposal is no more than realistic recognition of the existing situation.

Thirdly, I believe that the market pulp producers have as great a stake in avoiding pulp allocation as their customers. To the extent that the market pulp mills have contributed to the present situation through some violent alteration in their sales pattern, I urge that they put aside whatever motives they may have had and readjust their deliveries so as to give all their customers as nearly as possible the same proportion of their deliveries as in 1950. The same thing can be accomplished by directive from Washington, but when we requested and succeeded in having wood pulp removed from the commodities to which D.O. Orders are extendable, we undertook a responsibility for self-policing to which the market pulp mills must lend their sincere efforts.

Fourthly, I appeal to our bigger brothers, the integrated mills, to awaken to the realization that in the long run they have the most to lose by a policy of pulp allocation and control of end uses. We are talking about a shortage of 400,000 tons of market pulp, or perhaps 3 percent of all the wood pulp consumed in the United States. It seems incredible to me that the sixth or seventh largest industry

as the United States would let itself be embraced by the hydra of pulp allocation for a 3 percent shortage in the over-all supply of wood pulp. We know that integrated mills do not want to sell pulp in times like these. We know that their customers are clamoring for paper and paper board. Yet, statesmanlike action by a few of the larger companies, which would affect a very small proportion of their total production, might be the means of staving off controls that the industry would rue for many a year to come. I appeal to the great leadership of a great industry to join hands with us in a voluntary program to meet our present problems with a minimum of Government intervention.

These are only one man's views of the present situation. Many of our directors and members hold opinions that differ in varying degrees. As we go along during 1951, the Association hopes to develop constructive policies which will best serve the unselfish interests of its members, the interests of the industry as a whole, and the interests of our national Government. As in the previous emergency, the converter mills will give a good account of themselves under whatever conditions develop. There may be dark times ahead, but to paraphrase Winston Churchill, let us conduct ourselves that future paper makers will say of the converters: "This was their finest hour."

Market Woodpulp—1951*

T. R. Wilbert

Vice-President, Elof Hansson, Inc.

I appreciate the invitation extended me to appear before you today. I do so with no attempt to do more than highlight, if possible, a few facts regarding the pulp situation—particularly market pulp.

The market supply is of importance not only to the non-integrated paper mills and other buyers of woodpulp—but also affects the integrated mills as they may again be asked to allocate part of their production to their competitors, if Government requirements for woodpulp become large, or if other factors related to the Defense Effort should seriously reduce the available supply.

I will not attempt to discuss the subject of pulp allocations as I understand that other speakers will give their views on that subject before this Convention adjourns.

The supply of paper and board available to domestic consumers during 1950 was approximately 28,800,000 tons. During the fourth quarter the supply reached an annual rate of over 30,000,000 tons which, if maintained during 1951, would exceed the average for the years 1947, 1948 and 1949 by about 5,000,000 tons or 20 percent. Whether we will have a shortage of market pulp during 1951 depends principally upon whether the demand for paper and board continues at the current rate. To a smaller degree, the question of pulp shortage depends upon the supplies available from North America and Europe. Any reduction in demand for paper and paperboard, even as little as 5 percent, which would be equivalent to 1,500,000 tons, would probably result in substantial easing of the pressure on the pulp market in the U. S.

and eventually throughout the world. Despite the exceedingly strong demand which now exists for pulp, this is a factor which must be reckoned with by pulp producers and consumers in every country. I do not predict any such falling off in the demand but simply repeat that it is a possibility which must be weighed by all. Certainly, Government requirements for paper and board do not account for a 20 percent increase in demand over the 1947-1949 average. It remains to be seen what effect ceiling prices, high tax rates and restrictions on credit will have upon consumer demand for products of pulp, as well as other commodities.

Domestic market pulp supplies in the United States last year were at the highest level in history. The supply of market pulp available to the United States consumers was 3,425,000 tons—about 175,000 tons more than the previous high of 1947 and over 900,000 tons more than in 1949. Incidentally, that is a pretty good indicated of how rapidly the supply and demand for market pulp can change.

Assuming that there is no let-up in the demand for paper and board and other pulp consuming products, what are the prospects for pulp supply in 1951? That is a tough question to answer but it is possible to estimate what may happen—subject to many unsolved problems being settled.

Domestic Supplies

First, let us analyze the United States production of market pulp. If production is maintained at the 1950 fourth-quarter rate, United States market pulp production for 1951 would equal about 1,740,000 tons. This quantity may be somewhat reduced because several mills which sold surplus pulp last year are withdrawing from the market partly or completely for this year. The tonnage so affected is probably not more than 100,000 tons. However, if sulphur and pulpwood shortage do not interfere, there is a good possibly that increased production will be obtained from various other mills and that the total United States market pulp production this year will equal or exceed that of last year.

Exports from the United States in 1950 were only 96,000 tons against 122,000 for 1949 and 480,000 tons in 1940. Effective February 20, exports of all grades of woodpulp will be subject to export license control.

Imports

Total imports of market pulp last year were 1,905,000 tons. (This does not include about 475,000 tons imported from Canada by mills controlling production facilities in that country.) Of this imported market pulp, Canada supplied 1,235,000 tons and Europe 670,000 tons. Barring unforeseen production difficulties, we may expect imports from Canada in 1951 to be equal to or slightly above 1950. The Celanese dissolving pulp mill will be in produc-

* Presented before the Materials Committee of the American Paper & Pulp Assn. at the Waldorf-Astoria, New York, February 21, 1951.

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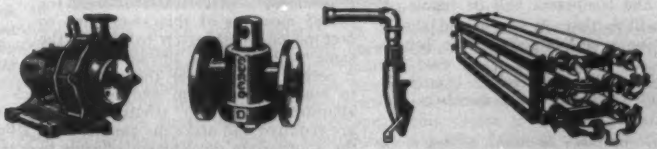

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tion soon and plans are under way to reopen the Sorg kraft pulp mill in British Columbia. I assume that we will have no great difficulty in establishing ceiling prices for pulp that will be satisfactory to practically all Canadian producers.

The more difficult question is how much pulp we can expect from Europe this year provided there is no interruption of shipments, as a result of war, or the imposition of international controls over the distribution of woodpulp.

Since the outbreak of the war in Korea, world prices for "spot" pulp have been skyrocketing to record levels. Some foreign buyers have been paying prices two to three times higher than U. S. contract prices. For example, Japan has recently paid $480 per metric ton for bleached sulphite and Germany has paid $425 per metric ton for unbleached kraft pulp. Correspondingly high "spot" prices have been paid by England, France, South America and all other countries outside the U.S.A. Obviously, no American paper mill could afford to pay such prices even if there were no price ceilings to prevent it.

You must wonder, as I do, how such countries can afford to pay so much higher prices than our mills. The answer is, they can't, without our help. The American taxpayer is footing the bill, if not directly, certainly indirectly. Through the ECA and our other foreign aid programs, as well as by our overseas expenditures for Korean war supplies, we have greatly stimulated and revived the economies of Western Europe, Japan and South America.

This economic revival, with the accompanying easing of currency restrictions, plus the more acute shortages of pulp and paper outside of North America, accounts for the fact that European producers are being offered such high prices for pulp.

In fairness to all concerned, it must be emphasized that most of the foreign pulp producers are trying to maintain a reasonable price policy for their American customers despite the fact that they could sell at much higher prices in other markets. These producers, and their Governments, realize that trade is a two-way street and in quoting prices for various markets, they take into account the level of prices they must pay for their own vitally needed imports. This is especially true between countries that have bilateral trade agreements under which quotas for the exchange of goods are fixed and prices adjusted periodically. Therefore, prices for pulp established, for example, by Finland for England, do not necessarily reflect the prices that will be charged U. S. customers.

There are some producers, of course, who are only interested in selling at the highest prices obtainable and they will divert some tonnage from this country. Furthermore, increased requirements for home consumption in Finland and Sweden will probably reduce the tonnage available for export.

During 1950, there was considerable idle pulp capacity in both Norway and Sweden due to pulpwood and labor shortages. Both of these countries were able to buy some pulpwood from Finland, which has an exportable surplus above that required for its own pulp mills. Perhaps, under the stimulus of the high prices now prevailing, the Swedish and Norwegian mills will be able to import additional quantities of wood this year and thereby increase their pulp production.

In view of the conditions outlined above, it is my belief that we are faced with the loss of some tonnage from abroad. My guess is that, even under the most favorable conditions, it will be as much as 100,000 to 150,000 tons.

However, if this loss of tonnage is to be kept at a minimum, it is important that Washington clarify the price regulations applying to imported pulp as quickly as possible. If unrealistic ceilings are applied to foreign woodpulp then, obviously, we can expect only token shipments from abroad; on the other hand, if we establish reasonable controls, with due respect for the problems of our foreign suppliers, I am sure that most producers in those countries will make every effort to maintain a market for pulp here and do so at prices that are not unjustified by world conditions.

At the moment, it appears as if we will have a slightly smaller total market pulp supply this year than last year. We know that it is insufficient to meet the current demand and if that demand continues it will undoubtedly cause operating difficulties for some paper mills. However, the industry as a whole, does not now appear to be threatened with any drastic shortage of market woodpulp.

Association Services In Mobilization*

W. B. Zimmerman

Vice-President, Howard Paper Mills, Inc.

It is my privilege and pleasure, this morning, to address the membership of the Writing Paper Manufacturers Assn. on this, the occasion of my retirement as your president.

We have entered upon a new period in our business, political and personal lives. They will be changed and regulated as military necessity, political expediency or even the personal caprice of Washington officials dictate. But make no mistake about it: our lives and businesses will be regulated.

I believe that, in the period ahead, we have a real opportunity to benefit from our association — and that the association has tremendous opportunities for service to the members and the public. Our secretary and most of the older members on the committees are rich in experience in dealing with these matters since they went through these things with Washington in World War I, NRA, World War II and now in the great mobilization program. Perhaps a brief review here this morning will emphasize what I mean.

One most important phase in our business lives will be required contacts with the Government. Obviously, it would be a sheer waste of time for the 85 members of this association to descend on Washington to discuss the same problem. The obvious solution, it seems to me, is for the association to study the problem and, whenever appropriate, develop whatever facts are required and make the contact with the appropriate government officials to present our viewpoint. At times this will require the selection of committees from the industry by your officers and may necessitate your spending no small amount of time on behalf of the industry.

But the important point, to me, is that our efforts thus can be *organized.*

We are fortunate, I believe, in having our association staff so Washington-conscious. They know whom to see and how to do it. This "know-how" is an asset we should fully utilize. It will save not only the time of our members but also that of the harassed officials of the various agencies in Washington.

This all brings me to an important consideration. Your association cannot help you, and serve your best interests, unless it *knows* of your problem. If a regulation, or proposed rule, seems

* Presented before the Annual Meeting of the Writing Paper Mfrs. Assn., Waldorf-Astoria, New York, N. Y., February 20.

unwise or is in some other way contrary to what you think best, make your views known to the association. That is the only way in which you can be sure that the association is helping you, and the industry, to the maximum extent possible.

Certain organization already is being created in Washington to deal with specific industry problems. For example, a Fine Paper Advisory Committee to ESA already has been recommended. This committee, much like the similar OPA committee, will be the official industry voice in matters of price recommendation and advice to the government. Another committee is in the process of being established by NPA.

As I see it, the facilities, information and ideas which exist and are available in the association will be of inestimable aid to such government committees.

But representing industry to and in Washington is only part of the picture.

We need to have sifted and interpreted for us the daily actions which Washington takes. Perhaps only 1 in every 5 regulations issued are of importance to our industry. But we want to make sure we do not miss that 1 out of 5! Additionally, we must understand if and how regulations apply to us. The association can put these things to us in language we understand, if this becomes necessary. In matters affecting the entire industry, the APPA will advise us. But the Writing Paper Assn. is the organization we must look to for full aid in the problems peculiar to the writing paper industry.

Here again, it will be important for each member to make suggestions freely to their associations. If there is an opportunity for improved service—we should be the first to suggest it.

The times ahead will be troubled—and trying. We in our business will be affected by such agencies as:

The Army, Navy, Air Force (and I will not leave out the Marines), NPA, ESA, ICC, Selective Service, GPO, GSA, FTC and NSRB, and I could name dozens of others!

We shall need the services of our association as we have in previous wars and emergencies. Your association, I know, is in a position to render real, valuable and effective service. Let's use it to the utmost and help ourselves and our government by doing so.

My two years as your president have been comparatively easy. Even though we saw very poor, then sold-out business in this period; pulp in plentiful and then short supply; uneasy peace and undeclared war; still, the burdens of office were not heavy. They were made considerably easier by the fine spirit of cooperation which you, the members, always have evidenced when called upon.

It has been a pleasure, gentlemen, to have served as your president. This is a wonderful industry—manned by a most unusual group of people—and I am proud to be a part of it. Did you ever stop to think how very few people leave our industry to go to another one? I can only express my appreciation and thanks for your loyal spirit of cooperation. To Morris Dobrow, John Darrow and their staff I want to extend sincerest thanks, because it is their contributions that make this Association "tick." You have all made the task of your president a pleasure.

Paper Exports and World Demand*

George V. Johnson
President, U. S. Paper Exporters Council, Inc.

In behalf of the members of the United States Paper Exporters Council, Inc., I welcome the opportunity of saying a few words on the frequently maligned and much neglected subject of U. S. paper exports. Many of my remarks may or may not be appreciated as far as my immediate audience is concerned, even though your presence indicates that you have some interest in paper exports. It is my intention to state our feelings with regard to the paper industry in general and its attitude toward the field of export.

One cannot help but compare United States mills' attitude toward overseas trade with their everyday behaviour pattern in connection with domestic merchants, converters and consumers. Very few producers, I am sure, have considered that export is merely a phase of merchant distribution. This is true whether a mill is an exporter per se or sells through an established independent exporter. Either way, an essential function must be performed. The extent of organization varies considerably, based on a multiplicity of products and the number of overseas

markets which are of interest. Is it any different when the export merchant assumes the burden of contact and communication with world markets, either through offices or agents, from the functioning of a merchant in Pittsburgh who visits the consuming trade? Both interpret the requirements from local to mill level, stock paper in many instances, handle credit risks and perform many other functions which are part of the marketing of paper and paper products, with personnel and facilities geared to the specific task. In spite of this analogy we find that exports still occupy a relative end position in the minds of the American paper industry.

May I state that paper exports from the United States in many instances have been profitable to the benefit of the industry in spite of, not because of, the attitude of many mills. Exports have increased through the years and more particularly in the past decade, and they will increase further. Percentagewise, it has been fairly constant but the total amount is up because of the annual increments in production by American mills. Regardless, it remains a minute portion of the total which the American paper industry has occasion to sell every year.

Historically, the United States paper industry generally has considered exports in terms only as a market to which one should turn whenever domestic demand falls off. Oftentimes this desire to secure a share of the overseas business that might be available was shared by a number of mills

* Presented before the Open Meeting, Export Committee of the American Paper and Pulp Assn., February 21, 1951, Waldorf-Astoria, New York.

to the point that the "hit and miss" entry into and exit from exports was usually accompanied by price reductions. As merchants, we decry such tactics as vigorously as the mills. Such behaviour does not enhance the reputation of exports, nor lead to what we seek, which is continuity of purpose and effort.

There are many mills which have consistently, over a period of years, sold their products overseas and which have built up in terms of such markets a sustained demand comparable to domestic consumption. It is only fair to concede that the domestic phase of a paper mill's activities is not without its pitfalls and problems, which must be avoided or solved. With certain few minor exceptions, the merchandising of paper overseas involves the same connotations as the marketing of such paper within the continental limits of our country.

We seek and we need the support of the American mills from both a short range and long range point of view. Our basic interests lie in furthering the sale of American made papers as we face an unprecedented situation as far as world demand is concerned. The United States occupies the unique position of the greatest potential supplier of paper to a world whose demand is high and constantly increasing.

Much has been said as to where the export demand was when mills needed business; this has particular reference to late 1948 and 1949. True, by and large, we did not and could not buy and deliver paper for export during that period. However, it also seems that the domestic merchant and converter were similarly not inclined to buy either. We not only faced a business recession but artificial restraints incident to nonconvertibility of currencies and devaluation. This is not offered as an excuse but as an explanation, for, in our own thoughts, our behaviour paralleled the pattern of business in this country.

Reference is also made to foreign competition and the part played therein by some members of the United States export fraternity. May I just say that European and Scandinavian mills suffered in 1949 as in this country, but their policy is long range based on an export viewpoint—it is consistent. United States exporters, as an element of survival in many cases, have turned abroad to obtain supplies because of lack of support here.

What of the future? In spite of local production in many countries of the world, practically no country outside of Scandinavia produces in sufficient variety or quantity to satisfy their entire demand. Increased consumption of paper and paper products world-wide is outstripping the rehabilitations and expansions wherever they are taking place overseas. This has its roots in the direct ratio of paper consumption to improvement of educational and sanitary standards, and the greater industrialization of areas. The past war wrought in all countries of the world many changes which have a direct effect on paper consumption. There is everywhere a desire to improve living standards which has occasioned higher and higher demands for the printed word. In the past, the larger markets for paper were those areas having a high degree of industrialization and education, and it is presumptive that this criterion will hold true in the future.

It seems that everywhere there is a growing consciousness of the part that paper is destined to play on the world stage. In my mind, R. M. Fowler, president of the Canadian Pulp & Paper Association, expressed it best when he said recently, "For better or for worse, pulp and paper commodities have more than a commercial significance. They are the fabric of civilization and essential elements in an efficient economy. The forecast of international policy and the needs of defense preparedness throughout the noncommunistic world may override purely commercial considerations in the coming year." With the spread of such thinking, an added incentive is made a phase of paper export. It is not too far fetched to consider that our own government may lend support to such objectives through the issuance of control orders akin to M-36. This would be consistent with the practice during the past war of foreign claimant agencies under M-241. I am not advocating "forced" exports but we must realize that paper is important today in the framework of aid and assistance being rendered to friendly allied nations throughout the world.

To visualize the potential market for paper, one has only to think in terms of a fraction of the per capita consumption in the United States as an indication of what the development of industrialization, education, sanitation and packaging will do to world demand. The opportunity today for the American paper industry to obtain for itself a prominent place in the field of exports is with us but can they and will they take advantage of the circumstances? Think of those industries which operate on a theory of 10 percent for export — that margin of production which spells the difference, not on a basis of a profitable turn whenever one feels inclined to dispose of tonnage but consistently over the long pull. World economics on which most exports depend will be stabilized in time so we must work together for our mutual benefit. The world wants and needs American paper and paper products. It looks to this country not only as the largest producer but of necessity. Can the American paper industry unbend and adjust their thinking from a consideration of exports as an infinitesimal part of their marketing program to a position that exports rightly deserve? From an estimated level of 365,000 tons of paper, paperboard and paper products exported in 1950, it is not inconceivable to see such total doubled or trebled in the years ahead.

The American paper industry has achieved remarkable records in production and quality of product. Let us hope they will give mature thought to a program of exports, whether they do it direct or through an established export merchant, let's see them do it!

GEN. F. L. HAWLEY
Addressed Writing Paper Mfrs.

WRITING PAPER MFRS. ASSN.

Bruce Crane, Crane & Co., Inc., Dalton, Mass., was elected President of the Writing Paper Manufacturers Assn. at its 90th Annual Meeting at the Waldorf-Astoria, Tuesday, February 20. Crane & Co., Inc., papermakers for 150 years, manufacture the currency paper for the U. S. Government. W. B. Zimmerman, executive vice-president of Howard Paper Mills, Inc., Dayton, Ohio, is the retiring President.

A. C. Remley, Nekoosa-Edwards Paper Co. was re-elected Vice-President, and George Williamson, Strathmore Paper Co. was elected a Vice-President.

H. V. Burgee was re-elected Alternate Representative of the association on the Board of Governors of the American Paper and Pulp Assn.

M. C. Dobrow was re-elected Executive Secretary-Treasurer. This marks 35 years of service by Mr. Dobrow with the Writing Paper Manufacturers Assn. John F. Darrow was re-elected Assistant Secretary and Miss Olive F. McGill was re-elected Assistant Treasurer.

Members elected to the Association Executive Committee representing the Rag Content Paper Group were: George Williamson, Strathmore Paper Co., elected Chairman of the Rag Content Paper Group; M. D. Bardeen, Lee Paper Co.; D. K. Brown, Neenah Paper Co.; T. M. Gilbert, Gilbert Paper Co.; Hale Holden, Byron Weston Co.; F. E. May, Rising Paper Co.; E. C. Reid, American Writing Paper Corp.; A. J. Schierl, Whiting-Plover Paper Co.; William Whiting, Whiting Paper Co.

(Continued on page 141)

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Waste Paper Situation

Colley S. Baker

Director, Eastern Conservation Committee of the Waste Paper Consuming Industries

Soaring wastepaper consumption — even topping the average weekly consumption during the last quarter of 1950 — during the first three weeks of this year, together with a shortage of market pulp, conservatively estimated for the year at 14 percent less than last year, indicates that all-out efforts to collect wastepaper will be required during this emergency year if full requirements of consumers are met.

During the first three weeks of this year wastepaper consumption exceeded that of the comparable period of last year by 35 percent; 1949 by 29 percent, 1948 by 23 percent, 1947 by 19 percent, and 1946 by 41 percent in the mills along the Atlantic seaboard.

In these three weeks, wastepaper collections were running 28 percent over the corresponding three weeks of last year, 31 percent over 1949, 30 percent over 1948, 15 percent over 1947, and 29 percent over 1946.

The wastepaper situation is serious. Unless wastepaper collections are increased immediately, it will become critical.

The average weekly consumption of wastepaper in the Eastern states during the first three weeks of this year is running about two and one-half percent ahead of the weekly average for the record-breaking fourth quarter of 1950 among the paperboard mills. The increase in consumption is greater among the paper mills, some of which formerly consumed only pulp, but are now adding wastepaper to their furnishes.

One thing that makes the situation especially serious at this time is the fact that the wastepaper consuming mills in the East have the smallest January inventories in five years, both from the standpoint of tonnage and days of supply. Serious winter storms, halting collections and hampering transportation, over a period of a week or more would have disastrous results.

In view of the fact that the wastepaper requirements of the paper, paperboard, roofing, building board and specialty mills today approach twice the peak tonnage of the last war, the greatest amount of help possible must be given to the wastepaper industry to produce the enormous amount of paperstock that will be needed for both defense and civilian requirements.

First of all, the public again must be impressed with the need for saving wastepaper.

Second, supplemental collections must be set up throughout the country to augment the supplies produced by the wastepaper industry from their established channels.

In carrying the wastepaper story to the public, a tremendous amount of publicity will be required — newspaper and magazine advertising and radio and television presentations. Supplemental collections by Boy Scouts, schools, churches, civic societies and veterans organizations will have to be set up in local communities through the efforts of the consuming mills. The mills must make themselves responsible for great educational programs to revive the old spirit of conservation that was built up during the last war within the local areas in which the mills are situated. Not only the consuming mills, but converters and substantial consumers of paper and paperboard products should take an active hand in stimulating the flow of wastepaper from their local communities in order to be assured of an adequate share of paper and board after defense requirements are met.

During the war, in 1944 and 1945, newspaper and magazine publishers, manufacturers and distributors of food products, box makers and many others contributed a great deal of money and supplied men to the conservation agencies of industry and government to spur wastepaper collections. It was in 1944 that the wartime peak of wastepaper collections was reached — 6,859,000 tons — 35.6 percent of all the paper and board consumed in the country that year. Since the war the ratio has dropped to 26 percent although the tonnage has increased substantially.

There is plenty of wastepaper available for collection to meet all needs. The problem is to get it saved and collected not only from the homes but industry as well. There is evidence of a very large amount of valuable paper, including old corrugated cartons and kraft containers and bags, being incinerated by various industries. The appeal must be carried to them, and arrangements made of regular collections.

Due to the fact that increased freight rates have made it uneconomical to salvage wastepaper in sections of the country far remote from consuming mills, the program of the Eastern Conservation Committee of the Wastepaper Consuming Industries, the territory of which embraces the Atlantic seaboard states, provides for cooperative activities by mills, dealers, converters and consumers of paper and paperboard products on local and regional scales rather than through a national campaign.

In setting up local wastepaper campaigns or drives, the sponsors, first of all, should arrange with local wastepaper dealers to purchase the wastepaper collected, and, wherever possible the prices to be paid by the dealer and received by the sponsoring organization should be agreed upon in advance of collections. Mills require wastepaper that is graded and baled; only the packers and dealers are equipped and qualified to perform this service. Prices paid by local dealers for such collections will vary, due to the services they will have to perform and distances from consuming mills. Prices being paid today are much higher, however, than during the last war, yes, even higher than at any time during the last quarter of a century.

The Eastern Conservation Committee, which was formed in December, 1945, under the sponsorship of the wastepaper consuming mills of the Eastern seaboard, and has been in continuous operation for more than five years, provides a service to both the consuming mills and dealers by keeping them informed through a weekly bulletin of the supply and demand situation; setting up local programs to stimulate the flow of wastepaper when and where needed, and organizing and assisting in the development of collections and the preparation of publicity matter. Permanent headquarters are maintained at 370 Lexington Avenue, New York 17, New York.

Abstract of President Beckett's Report

ASSN. OF PULP CONSUMERS

The Association twice found itself in a position to take important positive action, during 1950, to protect and improve the position of its members with respect to the supply of papermaking fiber. The first instance was in June, when we utilized an opportunity to go to Washington and testify before the Committee For Reciprocity Information. Robert H. Evans, our distinguished new president, then vice-president, Karl Clauson, our secretary, and I appeared and presented our views on June 5. Our arguments stressed the adverse consequence to the world market supply in the event of further tariff reduction applying to paper and paper products imported into this country. We contended, and believed, that additional tariff concessions on paper imports would encourage European and Canadian producers of woodpulp to add to their papermaking productivity and pour greater volume of competitive paper into our markets. This would not only diminish our sales and sales possibilities but would have the additional and even more serious effect of subtracting from the supply of available market pulp an amount equal to the output of the new paper machines installed, and would gravely aggravate the already critical deficiency of woodpulp throughout the world.

If this unhappy and unwelcome event should occur at this time, or at any time when the market pulp supply is far less than demand, we converting mills would suffer severe pressure from above and below, and would in effect find ourselves in the extremely uncomfortable, if not altogether untenable, position between the upper and nether millstones.

We felt our duty to our members plainly lay in the direction of resisting the action, or proposed action, which would both bring in a flood of competitive paper from abroad and deprive us further of the pulp we depend upon for our operation and our survival. Well convinced of our own arguments, we addressed ourselves to the Committee as earnestly and as persuasively as we knew how, and were gratified by the intelligent and attentive attitude of the panel before whom we spoke. The final decision has not been made, or at least has not been announced, so we can not justly say we have achieved our purpose.

The second major step undertaken with a view to moderating the difficult position of mills depending wholly or in large part on market woodpulp was a trip to the West Coast of the United States and Canada by Mr. Clauson and me last October. We visited the principal mills in the far west, and endeavored to portray to the owners and managers the world market situation as an opportunity for them to develop and utilize their resources to the best possible advantage. We tried to present an encouraging case for the construction of new capacity for producing bleached pulp, and particularly stressed the possibilities for good profit in the manufacture of additional market pulp as compared to the addition of new papermaking capacity to existing pulp units. We felt we were on firm ground and fully justified in arguing that the production of more pulp for their logical customers, the converting mills, would in the long pull profit them more than the integration of existing pulp mills with new paper machines, and at the same time would preserve for them the market pulp on which they now depend.

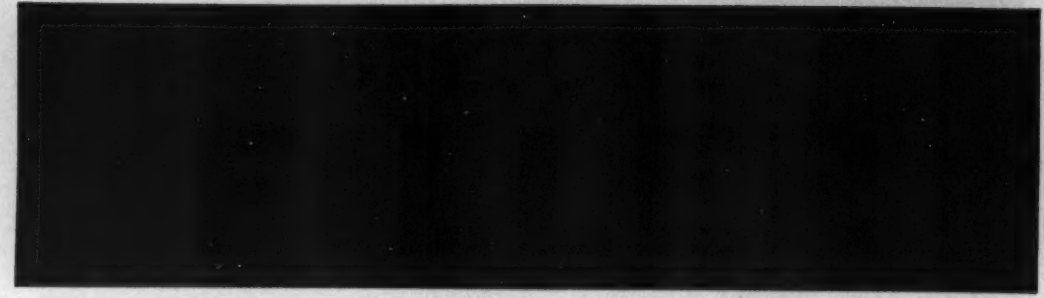
It is altogether satisfying to be able to report that we were received with every consideration and in some instances with a very positive show of interest. We felt it proper to assure the persons with whom we discussed this matter that many of our members would be willing to agree to contracts for a term of several years rather than for a single year, in order to insure their share of the output of new units for the production of paper grade woodpulp, particularly bleached fiber. Our ability to give this assurance, and our confidence in the propriety of doing so, were based on a number of conversations with substantial buyers of woodpulp, who asserted unequivocally that they would welcome contracts for, let us say, a five year term, for an assured supply of good quality pulp, produced on this continent and priced on the basis of prevailing industrial costs in this country. This would, of course, tend to put us in a much easier competitive position with respect to self-contained units, and would present to us all a much brighter promise for our future than that which we face today.

As we traveled from mill to mill in the far west we realized we had nothing to offer but our own opinions and judgments, given in good faith, but we were happy to discover that our representations were received without question everywhere we went, and the men we found ourselves addressing seemed, without exception, to feel that the Association we represented was indeed a responsible body of substantial concerns, which could be depended upon to pursue a steady course of constructive and cooperative development if adequately supplied with papermaking fiber. I feel safe in speaking for Mr. Clauson as well as for myself when I say we shall be surprised if our visit has not been stimulating, to a very positive degree, to some pulp producers who are perfectly capable of expanding their output, having the immense financial and natural resources necessary to do so, and being very glad to contemplate a continuing and growing market for their pulp.

In addition to the planned and scheduled program of propaganda I have alluded to in the last few minutes, we have tried to seize and utilize every casual opportunity to encourage, to interest, and to stimulate anyone who might either directly or through his association with others bring about an expansion of market woodpulp production. It is, after all, volume we need. If the volume is sufficient, all other factors, including price and quality, will adjust themselves. A perfectly free market, with total capacity slightly above current demand, is the ideal, which, while we may never enjoy it for very long, we should always strive for.

If I may depart for a moment from the assignment of reporting to you, and comment on our common problems, my message will thus be brought to its close.

The days to come will bring, in addition to the vexatious and trying obstructions already revealed, new and ever more devilish devices to torment us. Everything will become far more difficult to accomplish, and we will all feel a sense of loss of freedom of action, of opportunity, and in fact, of actual revenue, as the red tape reeling out of Washington becomes more tangled and enmeshes us more tenaciously in its coils. What we would buy we shall be unable to procure; what we would sell may cost us more than the price we are permitted to charge. We may be outraged by the spectacle of someone else enjoying circumstances easier than ours, either because of good luck or a bit of connivance with the politicians. We may be shocked by the devious and greedy operations of a few who will, inevitably, degrade the situation and cheat and lie and exploit for their own gain at the expense of others. Even though all this be so, let us keep our balance, our temper, and our honor.



NOW

MAKES BRILLIANT WHITE PAPERS

97

NOW

SAVES BLEACHED SULPHITE COSTS

BRIGHTNESS

BRITONE FILLER *makes brighter white papers.*

BRITONE FILLER *saves bleached sulphite costs due to its intensely white color.*

BRITONE FILLER *produces brighter white papers from ground wood and unbleached sulphite.*

NOW

MAKES STRONG PULPS

NOW

GREATER WET STRENGTH

ADDS STRENGTH TO SHORT FIBRES

Definite Results from a unique, Strong Flexible Film

INCREASES

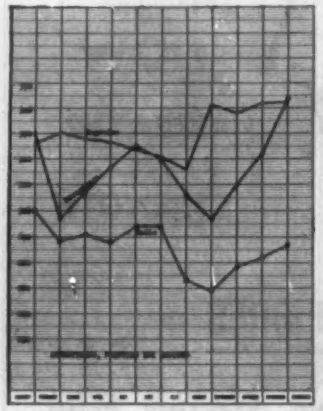
MULLEN-FOLD-TENSILE

Trends of Production and Supply 1950

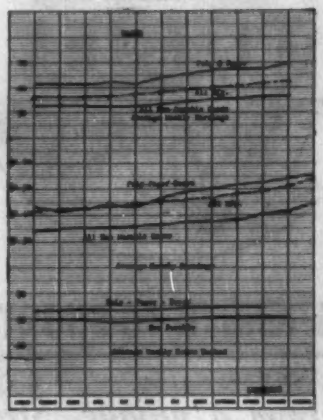
The following graphs represent the trends of pulp and paper production for 1950, the greatest year in our history. Certain indicies are included where they are of importance, and have vital effect on our production. In this year of unprecedented buying of everything, the suppliers of chemicals and other materials have done a fine job. Their production trends are worthwhile noting.

When the history is written, all those concerned can look back on 1950 as a major achievement. Unfortunately no one can rest on his laurels, for the coming years will present even greater and more difficult problems.

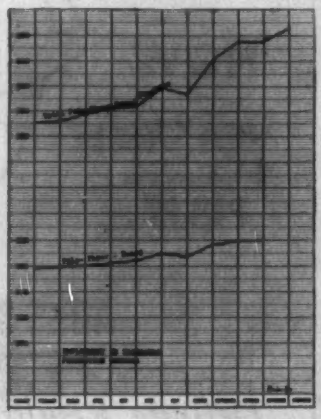
May all arise to full stature in the coming challenge.



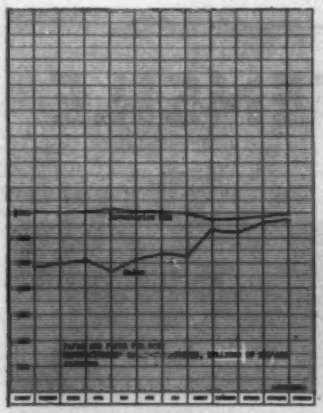
Advertising Printers Ink Indices



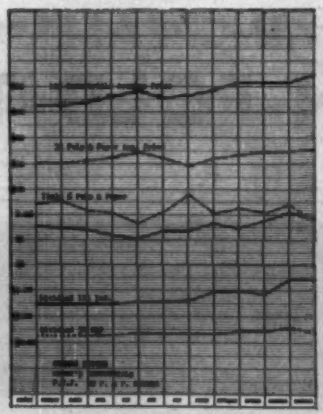
Average Weekly Hours Worked



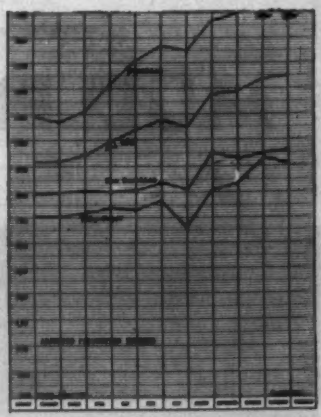
Production Workers Employment



Manufacturers Sales Inventories Millions of Dollars—Adjusted



Common Stocks Moody's Industrials—P.T.J. 32 P. & P. Stocks



Adjusted Production Indices

for

WHITEST WHITES

SOLUBLE DYESTUFFS

SOLAR COLORS

INDANTHRENE DYESTUFFS

Our nearest office will be glad to discuss these colors with you and furnish any samples and formulas you desire.

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Is Increased Wire Or Jordan Filling Life Of Interest To You?

VORTRAP

USERS HAVE REPORTED 10% TO 30% AND MORE OF INCREASED WIRE LIFE BY REMOVING ABRASIVE FINES AND SAND.

ON WASTE PAPER STOCKS MANY VORTRAP USERS REPORT 4 TIMES OR MORE INCREASED LIFE OF JORDAN FILLINGS AND SCREEN PLATES AFTER INSTALLING VORTRAPS.

WHY NOT FIGURE THESE SAVINGS IN DOLLARS FOR YOUR MILL?

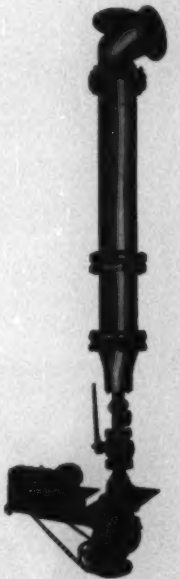
— THE VORTRAP FAMILY —
ONE OR THE OTHER OF THESE VORTRAPS WILL DO YOUR STOCK CLEANING JOB.

8" AND 10" VORTRAPS WITH WASTE RECEIVER

4" VORTRAP

1½" VORTRAP

3" VORTRAP

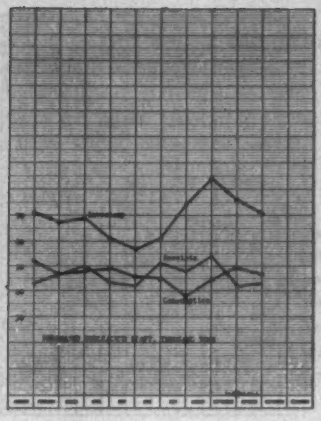


8" AND 10" VORTRAPS WITH AUTOMATIC REJECTS VALVE

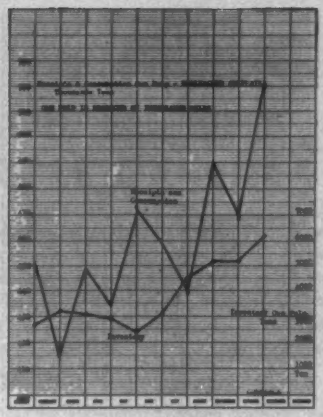
NICHOLS ENGINEERING & RESEARCH CORPORATION

70 Pine Street — New York 5, N. Y.

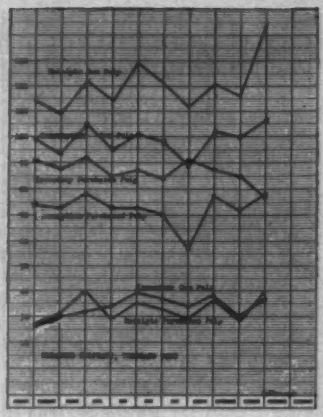
40 So. Los Robles Ave., Pasadena 1, Calif.—1477 Sherbrooke St., W. Montreal 25, Canada



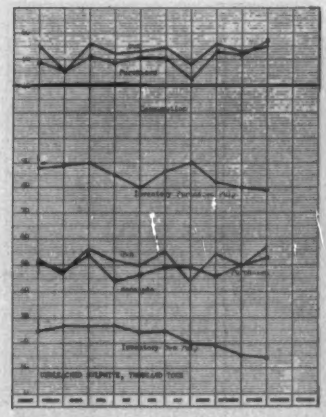
Purchased Unbleached Kraft. Thousand Tons



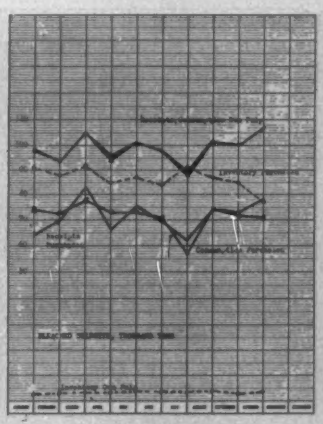
Receipts & Consumption—Own Pulp—Unbleached Sulphate



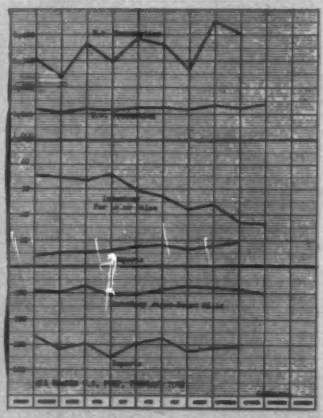
Bleached Sulphate Thousand Tons



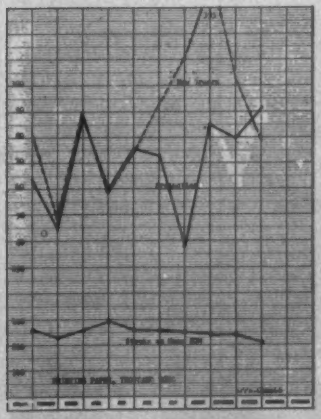
Unbleached Sulphite Thousand Tons



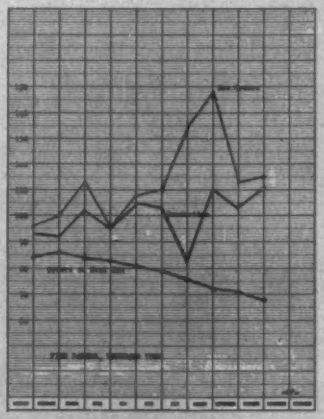
Bleached Sulphite Thousand Tons



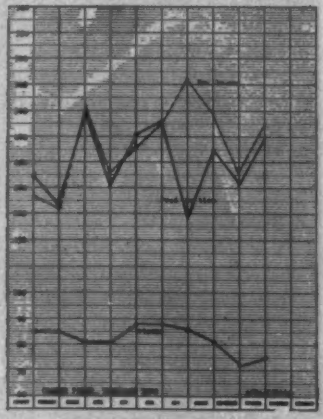
All Grades U. S. Pulp Thousand Tons



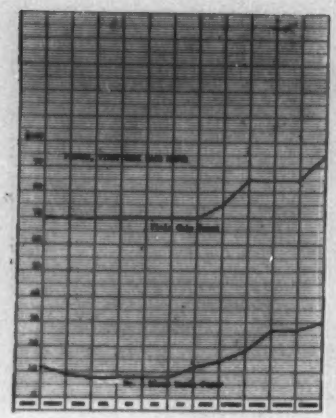
Printing Paper Thousand Tons



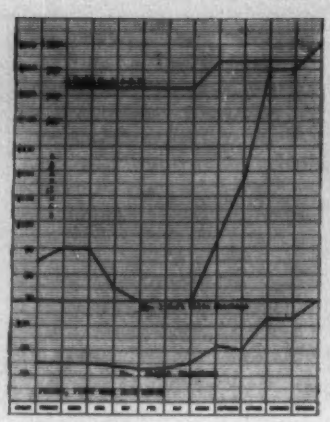
Fine Papers Thousand Tons



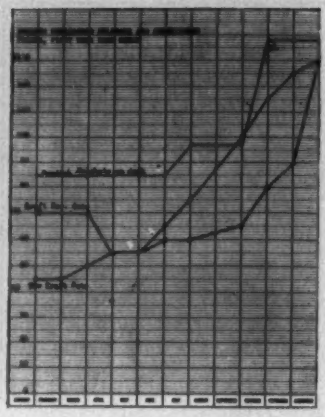
Coarse Paper Thousand Tons



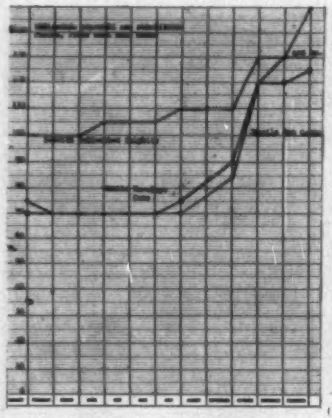
Plain, Chip and No. 1 Mixed Waste Paper



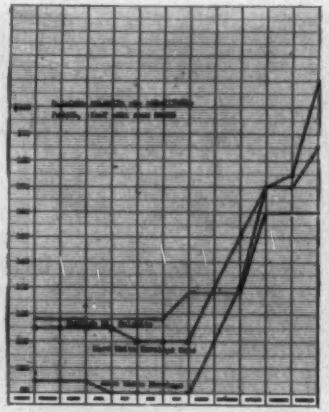
Book, Magazine and Showings



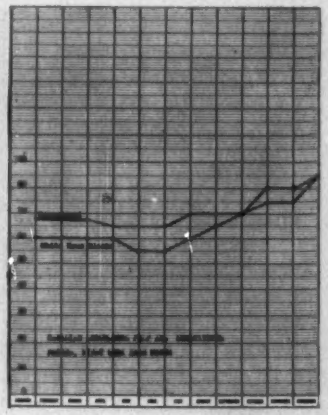
Unbleached Sulphate & Substitutes



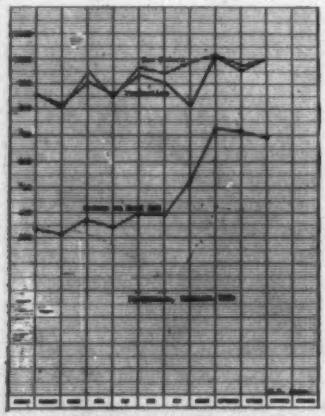
Unbleached Sulphite and Substitutes



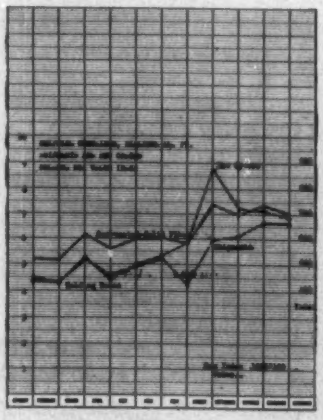
Bleached Sulphite and Substitutes



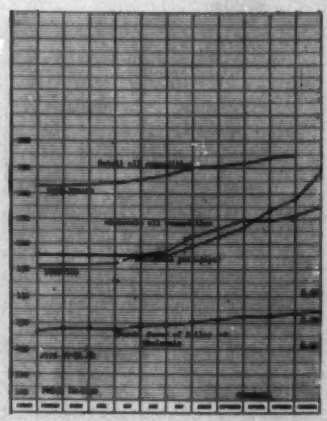
Canadian Groundwood and Substitutes



Paperboard, Thousand Tons



Shipping Containers, Billions Sq. Ft.—Folding Box Value Index



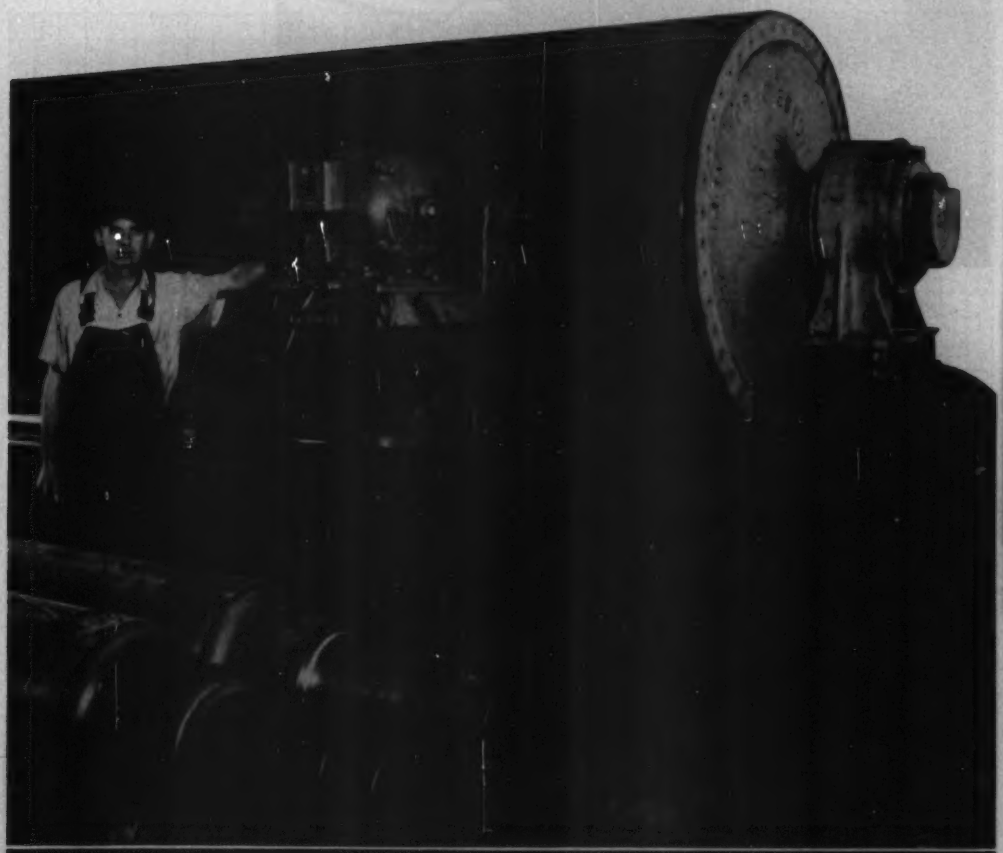
Price Indices

Finishing a 60" roll on a modernized

LOBDELL GHV ROLL GRINDER

Installed in 1936, this No. 5 GHV Grinder was originally designed to finish rolls up to 42" diameter. Now, with the installation of grinding wheel heads of today's Low Head design and an Auxiliary Extension Mechanism, Lyvern Barnett, Grinder Operator, is able to grind to close tolerances and proper crown the giant 60" diameter rubber covered press roll from the new cloverleaf press section of the Crossett Paper Mill, Crossett, Arkansas.

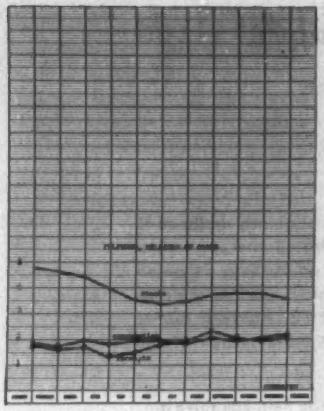
If you have a similar problem, perhaps we can help you solve it. Write for detailed information.



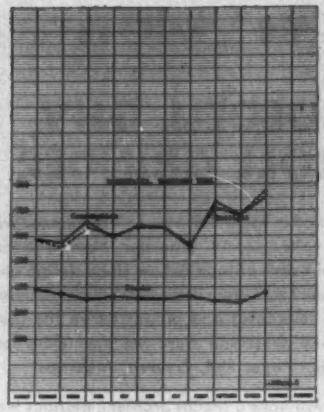
LOBDELL UNITED COMPANY

1836 WILMINGTON 99, DELAWARE 1951

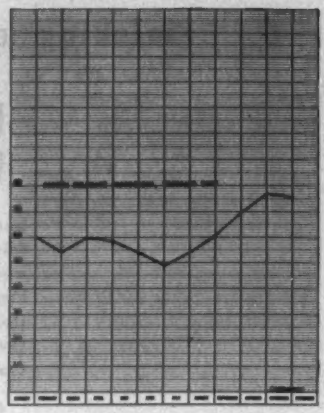
A SUBSIDIARY OF UNITED ENGINEERING AND FOUNDRY COMPANY



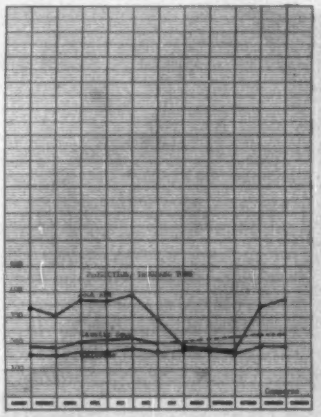
Pulpwood—Millions of Cords



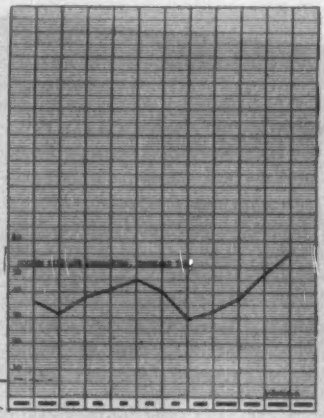
Wastepaper—Thousand Tons



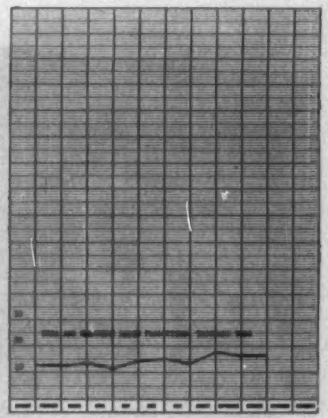
Sodium Sulphate Production Thousand Tons



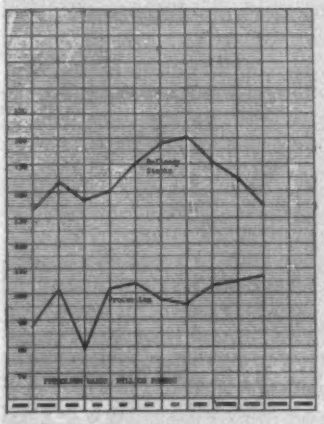
Alkali and Chlorine Production, Thousand Tons



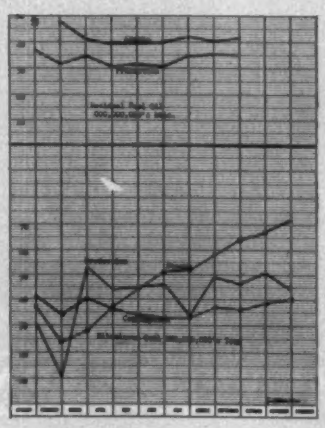
Sodium, Silicate Production, Thousand Tons



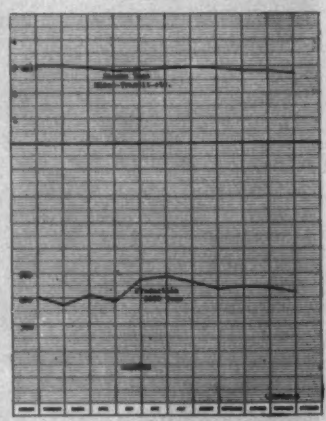
Urea and Melamine Resin Production, Thousand Tons



Petroleum Waxes Million Pounds

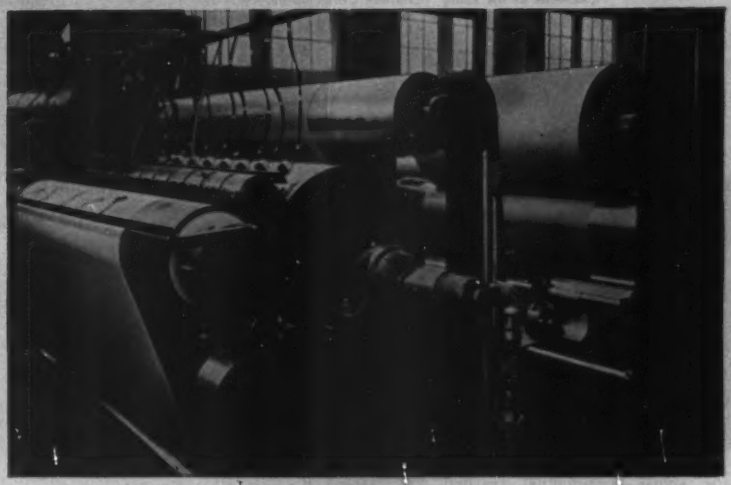


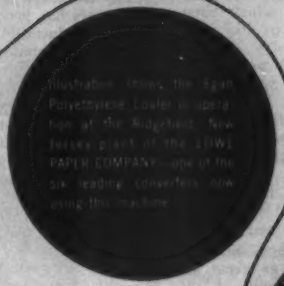
Fuel—Coal and Oil



Sulphur

Egan POLYETHYLENE COATING MACHINE





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1951-?

D. C. Everest

Chairman of the Board, Marathon Corp., Rothschild, Wis.

"Crystal gazing" has become a habit with me, but never before has the "crystal ball" been as foggy as it is at this moment.

Heretofore, there has been some precedent or basic fact on which one might base his predictions. This situation does not apply to the pulp, paper and paperboard industry alone, but to every industry in the United States and to a large extent in Canada.

Reports compiled to date for 1950 indicate consumption of paper and paperboard in excess of 29 million tons. If the definite facts relative to the depletion of inventories which were in the hands of producers, distributors and users on January 1, 1950, were known, we would probably find that the actual consumption reached 30 million tons. This is a far cry from the consumption of 1940 which then reached an all time high of 16.7 million tons. During the years 1941 to 1945, inclusive, controlled production held the consumption figure on a straight line basis of about 19.7 million tons. Since the close of the war, the consumption figure has moved upwards at a rapid rate, in fact, if the indicated figure of 30 million tons is approximately correct, then the increase in consumption is at a rate of 50 percent above that of 1945.

No other long established industry can show anywhere near as great an increase in the consumption of its products. The year 1949 was the only year in which the consumption tonnage fell below the total of the previous year. The great increase in 1950 clearly demonstrates that in 1949 there was a liquidation of inventories, which figures are unobtainable in any compilation of consumption tonnage. The reports for 1950 indicate that all those who had liquidated inventories in 1949 were trying to rebuild them. How successful they were in this effort is clearly shown by the stocks presently in the hands of distributors, which are at a dangerously low ebb, and the continued demand on the part of consumers for shipments to be made "day before yesterday." I am interested in several industries and I have yet to find a single one which has an adequate inventory of almost any material or supply, let alone an excessive inventory. This is particularly true of the so-called "stock-items" which we have always considered the backbone of the merchants' and other distributors' business.

The reason for this enormous increase in consumption is twofold:

1. The increase in population in ten years of 20 million people.
2. The development of new products.

In the first case, too many people have paid little attention to the rapid growth in population. In the paper and paperboard field, the moment a child is born he becomes a consumer and continues so until his last obituary appears in the local newspaper.

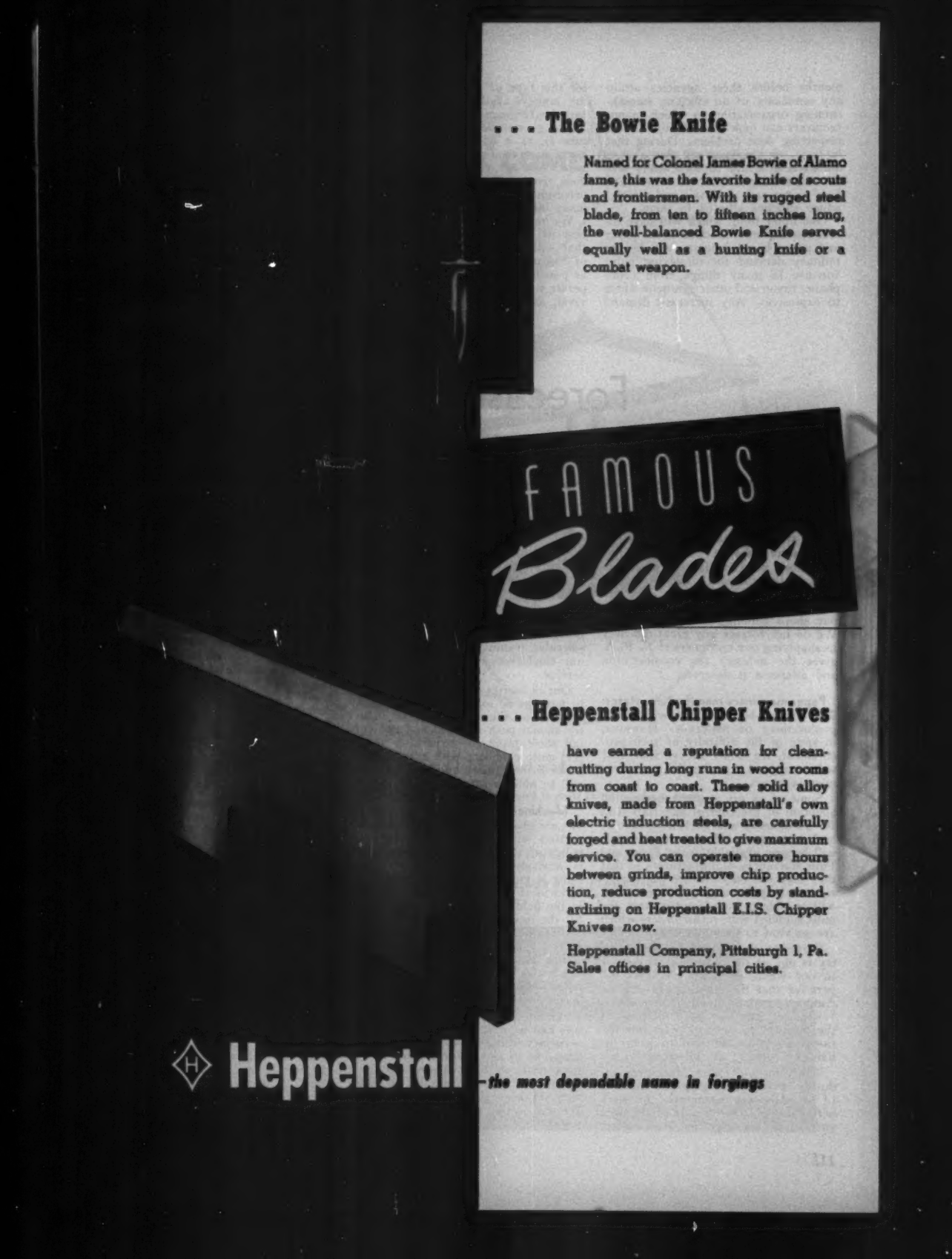
In the second case, the rapid increase in wage rates and resultant labor costs has forced the development of new products for use in connection with labor saving machinery. This is particularly true in all lines of automatic packaging for hundreds of consumer goods products. Incidentally, if these automatic machines had not been developed, the manpower shortage would have been greatly accentuated and through the adoption of the "self serve" idea in food distribution (which has also helped to lessen the labor shortage), the whole development has held down the cost of living index. There is no possibility of a return to the old "hand packing" or bulk distribution of former days. Too many people are dependent on the limited cubic feet of space in modern refrigeration.

As to the year ahead, it is my opinion that the *demand* will far outrun anything we have ever known. This does not mean that *consumption* will exceed 1950. As a matter of fact, I expect *consumption*, including the products used in the war preparedness effort, will be considerably less than in 1950. The whole business depends on our ability to produce. Production will be much less in 1951 than in 1950, due to the shortage of manpower in the production of pulpwood and the collection of waste paper. Due to war use, much of the paper and paperboard products produced will not be recoverable as "waste paper" and thus will further deplete the normal supply of waste material. No one can tell the ultimate destination of these war use paper products, and no one chases around military camps on foreign soil or on battlefields picking up waste paper.

While in my opinion the manpower shortage is the most difficult thing we will have to deal with, there are many other factors which will run a close second in importance in keeping plants operating.

The whole industry runs head-on into military demands for chemicals, metals, transportation, and practically every other thing required in a war effort. All of these will be in short supply regardless of what the spokesman for some industry may say about his industry's ability to supply the world. Most of these fellows shoot off about their ability to supply all of everyone's needs without even knowing what the military requirements will be. It is questionable whether the highest military men even know what their needs will be. It all depends! It depends on so many things that no one can definitely say what we must furnish. It is a cinch that military requirements will come first and civilian population will divide what is left of the things produced on some sort of a basis which will be termed "equitable."

Controls must be put into effect; otherwise, we will have complete chaos. These agencies which administer the controls must be staffed with people—and with people who understand something of the administration of these various orders. We do not maintain a supply of such people in cold storage who can be supplied on a moment's notice. These administrative organizations must be developed. There is no question but we will go through a period of confusion for at least six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months before these agencies attain any semblance of an efficient, smooth-running organization to which manufacturers can look for definite answers respecting their problems. During that interval, production will be slowed down while many manufacturers will be endeavoring to find out where and how to get raw materials and maintenance supplies allotted to them.

One other thing which will have direct bearing on production in the paper and paper board industry will be the military demand for dissolving pulps for use in many things from cellophane, rayon and other synthetic fibres to explosives. Any increased demand for this type of pulp merely shortens the supply available for paper and paperboard manufacture.

Any guesstimate on net financial return is, as it will be in all industry, carrying crystal gazing to the nth degree. No one can tell what will be done over the year in the matter of price and wage controls, taxes and so many other factors affecting profits.

We might as well go ahead to the best of our ability, doing the things that will help the country to get out of the mess we are all in, as quickly as possible. We are faced with a desperate situation involving our own survival, and any decrease in the thing we call "profit" may be regarded as an investment in the future security and maintenance of our business. In this way we provide for the future income of our stockholders and continued employment of those associated with us. All United States industry will find that it may have a few years of struggle to even maintain its status quo and be in position to resume some semblance of normal business when the mess is cleared up. It will not be unlike what millions of young men and women will have to do in the regulation of their own lives. Interruptions are distasteful, but in the present world situation they are unavoidable.

Forecast for 1951

There are all kinds of rumors on the future. We have asked many suppliers to read the horoscope and give us their opinions of their position, for your guidance.

A stock preparation equipment manufacturer states: The month of December was the largest month in sales in the company's history. January may surpass December. We are planning on some war work to keep our shops running at top production. We do not foresee any great difficulty in supplying our customers if N. P. A. gives the industry the consideration and attention it deserves.

Paper machinery manufacturer states: The "buga-a-boo" of 1951 will be the procurement of materials. However, in spite of the difficulty of such procurement, we firmly believe that 1951 will be a good year for the machinery manufacturers.

Some of us are strongly urging the adoption of the control materials plan for all industry and we believe that by such a program, that more materials will become available to the Paper and Pulp Machinery Manufacturers so that they may not only further the expansion of the pulp and paper industry but will be able to satisfactorily keep the mills supplied with repair orders which are so vital to their operation.

Certainly, the pulp and paper industry is one of the most vital industries in our whole economy and it is imperative that the National Production Authority make available materials, as I say, not only for the expansion of the industry to keep up with our national economy but also to keep the industry running at full capacity.

The Pulp and Paper Machinery Industry is further urging the creation of an Advisory Committee to work with the top level officials of the pulp and paper industry in Washington. We believe that by a proper presentation of the situation, they will readily see the urgency of allotment of materials to our industry.

We do not look for very many manpower shortages—certainly not in our section of the country, although it is going to be necessary for us to do considerable training to replace those of our employees who are called to the service.

Our deliveries are in necessity going to have to be extended but we firmly believe that the pulp and paper industry should push forward and not curtail their plans for expansion as we feel quite confident with extreme diligence by machinery builders, that they will be able to supply new equipment.

Machinery manufacturer states: We are glad to make comments in connection with the present and future policy of this company. Of course, it is anybody's guess which way this thing is going. At the present time it looks as if there was a lot of business in the field of pulp and paper making for the next two years ahead. On top of this the requirements of the armed services, as soon as the program is rolling, will be considerable. As we did in the last war, we stand ready to fit into the picture anyway that is required.

We hired space, took on sub-contractors and went to any extent of trouble necessary to handle whatever was presented to us as a critical item. At the same time, we took care of our trade within the scope of the WPB allotment to keep the paper mills going. We will do this again.

I believe at this time that any outfit which is set up to control rationing of critical materials and issuing priorities for the paper mill work will realize a great deal better the importance of paper to national defense and to the country at large, whereas it took some time and some pressure to get this across in the previous war. I can say in the final analysis that the paper division did a splendid job with what they were allowed to do and I doubt if you will find too many people who would kick on the way it was handled except that it was so slow in recognizing how important a part paper plays in the world at large, that no provision was really made for the paper industry at the beginning of the allotments. If paper is rated, the amount of paper is determined in all its different forms and it is given its proper location in the picture, I am sure it will work out well.

Certainly packing materials are just as important as the things which go into the package because without them, the article itself cannot be shipped or delivered. This is only one of many items of paper which is very important. As everyone knows, the national economy, the social status and the general well-being of a nation now can be measured by the pounds of paper used per capita. There are so many technical uses, every day requirements for building to say nothing of the needs for printing for general information, etc., that it is an endless story. In analyzing the well being of the human race, many people put paper third in importance with food and shelter only preceding it. All of the other things so depend on paper and the uses of paper that without it and

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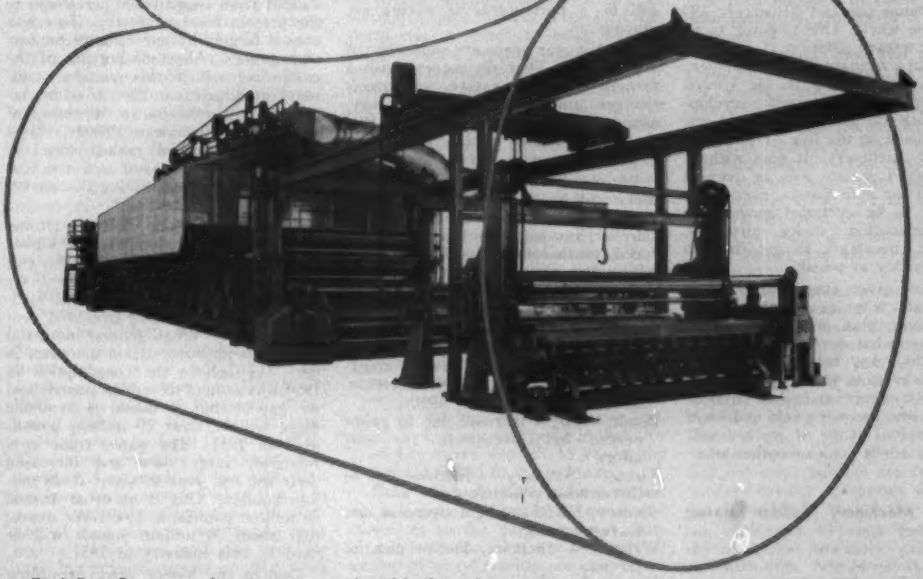

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That's why Rice Barton machines have won so many friends in mills where costs, quantity and quality count.

Whether you make heavy board for cartons or the fussiest, thinnest paper for radio condensers, we would like to work out your problems with you. Please write:

with a serious restriction on it, they will likewise be greatly affected.

If the importance of paper is well understood by the Bureau that is set up to handle it and they do not consider this just another commodity of very ordinary importance, I am certain that a Bureau can be set up to administer the needs of the paper industry which, of course, will include the machinery we build in a satisfactory manner. We are ready to do our part in any way that is necessary. Somehow, we feel that outside of a definite all-out war the division of restrictions should be somewhere in the line of a minimum of 40 percent for domestic home use and 60 percent all-out defense work. This is going to be a very necessary division if we keep up the mass of paper mill equipment which is now running in the United States and supply the new developments which are going to be made and must be made in the line of pulp and paper mill machinery. It goes without saying that if we are into an over-all picture of war with Russia, everything will have to be curtailed except the guns, ammunition, tanks, airplanes, boats, etc., necessary to get the job done as quickly as possible.

You have given everybody a tough job to state what is ahead in 1951. We can only plan around the edges until we see what develops in the next few months. Any help which can be given, however, to the proper organization of a paper and pulp division with men who know the field and know the tremendous scope of its use will, of course, result in a smoother operation.

Paper Machinery Builder states: The present state of confusion and lack of any clear-cut policy on the part of governmental authorities in connection with material shortages have created a serious mutual problem for builders of paper-making machinery and auxiliary equipment, as well as for the mills who wish to purchase and use it. The total quantities of basic materials used by all builders of paper-making machinery and auxiliary equipment are not great by comparison with other large industries like the paper industry itself. Relatively small tonnages of copper, nickel, stainless steel and other currently scarce restricted items are involved. The same is true of steel and cast iron. Until some kind of order has been established through the proper channels in Washington, D. C., the builders and manufacturers who supply the paper industry are hard pressed to make any kind of rational delivery prediction.

Presumably, this situation will not continue much longer. In the meantime, both the builders and the paper mills will have to continue relying on each other's mutual understanding of the existing facts, and be as realistic as possible. This means that the builders must plainly and clearly tell the prospective customer just what the facts are regarding the item in question, and the paper mill must anticipate its future needs to the greatest extent possible in order to permit unusually long deliveries.

Considering the importance of the paper industry to the nation's war effort, there is no doubt that finally its needs in the way of new equipment and repairs will be given the preference so richly deserved.

Wire manufacturer states: Under a planned economy it is difficult to predict the future. The planners themselves cannot do it. So any prediction for 1951 for paper mill wires or felts, will be a pure guess as events are shaping up.

The last war years are somewhat of a guide kit. They do not establish a formula for the future. So many changes and technological improvements have been made since 1945, that the paper industry will profit or lose in accordance with such changes.

To clearly analyze the usage of paper and board, we might do so by classes of product. To the degree that more or less paper or board are produced, to that degree will wires and felts usage go up or down.

Newsprint — Small increase, as war news might raise sales. As most of it comes from Canada, little change in felts or wire usage.

Book—As service men devour magazines in reading — slight increase. Mills ran fairly full in 1950.

Bond — Slight increase due to paper needed by Government for war effort.

Tissue — Sanitary — Increase due to Government Purchases.

Tissue — Facial — Slight decrease due to restrictions.

Writing — Increase due to men in service.

Hanging — Decrease due to building restrictions.

Building Paper — Decrease due to building restrictions.

Kraft Bag—Increase due to more purchasing power for food and merchandise.

Kraft Board—Decrease due to curtailing of building and consumer items.

Since there is no indication of complete war mobilization for 1951, and since paper is so vital to the war effort, the planners cannot curtail paper to any great extent.

Where restrictions are placed on manufactured items that use paper, like autos, refrigerators, radios, washing machines, etc., to that degree will paper production drop.

A good guess for 1951 is that tonnage of paper and board will approximate 1950 and therefore consumption of wires and felts will be the same. Orders for wires and felts may drop, as most mills ordered heavily in 1950 for 1951 shipment. Due to experience gained in the last war, there should be less confusion in handling supplies, after the N.P.A. get functioning. Able men are being selected to do the job and if there is confusion it will not be their fault. The job ahead is a terrific one and will need all of our cooperation.

For 1951 there will be some shortages of materials, some very scarce, but in general they should not be too severe after the programs get organized in production. Manpower may become our greatest problem in manufacturing supplies.

A chemical supplier states: Casein advanced materially in price during 1950. Just as soon as the Korean war broke out, the price in the U. S. advanced from roughly 20c per pound to the present level of 40-41c. This was caused largely by our reliance on foreign grades. About 65 percent of the casein we sell in this country originates in Argentina. The price in Argentina advanced due to the threat of war in the European theatre. Most European countries rushed into the Argentine market and covered for their requirements, pushing the market up quickly to present levels.

Consumption both in the United States and other countries is higher today than formerly. Such industries as the rubber tire manufacturers are using increasing amounts for the manufacture of rayon cord tires and synthetic rubber. When general industrial conditions improve, casein increases in use. We believe the consumption in 1950 was around 65 million pounds and we expect that if casein is available there will be over 70 million pounds used in 1951. The paper trade is a relatively large user and increased their use last year to about 26-28 million pounds. This is up from around 20 million pounds, in 1949. We expect that about 30 million pounds will be used by this industry in 1951.

Due to the higher price prevailing for casein, we expect that larger quantities of American casein will be made in 1951. Present production is about 20 million pounds annually but we are hopeful that this will increase to between 25 million and 28 million pounds in 1951. If this occurs, the higher production should have a stabilizing effect on the American market price.

In the last war, casein prices were controlled with Great Britain and the Argentine and we were able to keep prices down around the 16 to 18c price range during most of the war, although the ceiling price for casein during that period was 21 to 24c. We are inclined to doubt that the same type of control could be arranged during any immediate future war as the Argentines are more in control of their markets and British influence in the Argentine is not as great as it was six to ten years ago. Should an all-out war develop in 1951, we would probably have sufficient casein supplies here inasmuch as European countries would not be able to get it and Argentina would be more dependent upon the American market for disposal of its production.

We expect that prices will continue at fairly high levels unless our Government puts on controls forcing prices down.

Chemical supplier states: Because of the current world situation, with shortages becoming more and more apparent, and with use of many materials being controlled by Government order, it is natural to ask what lies ahead, in respect to the availability of rosin size for use by the paper industry. Any discussion of the future supplies of rosin size involves consideration of the probable availability of rosin, since this material is still the principal ingredient of paper size. It may, therefore, be instructive to compare the current rosin supply situation with that which existed during World War II.

The paper industry well remembers the production problems which arose when the War Production Board found it necessary to establish consumption quotas through order M-387, which was effective on February 28, 1945, at a time when it appeared that supplies of rosin were in danger of becoming exhausted. That order established a quota for the paper industry at 70 percent of the amounts of rosin used during the respective quarters of 1944. Will something similar be necessary in 1951?

During recent months, all signs have pointed to a very tight rosin supply. For example, the Government had accumulated a stock pile of 748,274 drums of gum rosin on March 31, 1950, as a result of the naval stores loan program. By March 31, 1951, this stock pile will be down to around 300,000 drums, according to present indications. How much of the rosin that has been withdrawn is still in stocks in users hands is problematical. Production of gum rosin is reported to have declined, compared with the previous year, but present reports are that more cups are being hung, which, if true, would indicate a larger production.

A little more optimism seems justified at this time, however. For example, statistics show that total rosin stocks in the United States (including gum and wood rosin in the South and at industrial plants and stock points) had declined from 1,605,286 drums on March 31, 1943, to 794,786 drums on March 31, 1944, and to only 388,266 drums on March 31, 1945. In comparison, stocks will have declined from a reported figure of 894,280 drums on March 31, 1950, to an estimated figure of about 500,000 to 550,000 drums in the U. S. on March 31, 1951, according to the best information available at this time. While this is by no means a large reserve, the current stocks are larger than was the case when M-387 was put into effect back in February, 1945.

Further, an examination of the records shows that exports of rosin have been much heavier during 1950 than had been the case in recent years, and much in excess of the level back in 1943 and 1944. Evidently our foreign customers have been replenishing stocks and perhaps have been building up supplies of rosin in expectation of a tight supply situation.

While exact figures are not yet available, it is estimated that exports during the crop year ending March 31, 1951, will amount to 900,000 to 950,000 drums of rosin. Exports during the four previous years had averaged only about 500,000 to 550,000 drums per year. Strict control of exports can conceivably conserve as much as 400,000 drums of rosin for use during 1951 by domestic consumers, including the paper industry. Since the net decline in total stocks of rosin in the U. S. during the current crop year, ending March 31, 1951, is expected to be in the neighborhood of 300,000 to 400,000 drums, careful control of exports can do much to bring back a better balance between supply and domestic consumption requirements.

Another point worth mentioning is that domestic consumption during 1950 was at a high level. The paper industry was operating at about capacity. Therefore, if quotas are deemed necessary during 1951, and if 1950 is chosen as a base period, which would be comparable to the year chosen under M-387, a favorable basis would be provided for the use of rosin size.

To summarize the situation, it appears, from the best information now available, that sufficient rosin size can be supplied to the paper industry so that a high rate of operation can be continued during 1951. Even if Government agencies decide that some form of consumption control is desirable, to further extend existing supplies, it does not now appear that this need be severe enough to cause any serious hardship to the industry.

Corn products manufacturer states: As a supplier of starches, gums and dextrines to the paper industry, barring a hope for, (but not anticipated) easing of world tension, we expect that there will be a continuing shortage of starches, gums and dextrines throughout 1951. Unless the Government steps in and purchases large quantities of corn starch for export shipment such as they did during the last war, we do not think the shortages during 1951 will be as severe as during the last war. So far, there have been no indications that heavy Government buying for export will be resumed.

The supply situation on dextrines and adhesives made from dextrines has been relatively tight for several years, and in recent months the production has been falling considerably behind demand. It is anticipated that the dextrine supply situation will be bad throughout 1951, although companies with a past purchase record may reasonably anticipate receiving quantities of dextrine approximately equivalent to their past purchase records.

The supply of chlorinated or oxidized starches and gums, being generally dependent upon the supply of chlorine, has already felt the pinch. The chlorinated starches will be in short supply during the coming year.

There appears to be plenty of corn in the United States, and barring shortages of raw materials such as sulphur and chlorine, the wet corn milling industry should be able to take reasonably good care of the domestic requirements of their established customers.

Corn Industries Research Foundation states: With scarcities looming ahead of many raw materials and other supplies which industry needs for its operation, what is the situation in respect to starches for paper makers?

This question was asked this week of Floyd J. Hosking, Executive Vice-President of the Corn Industries Research Foundation, the trade association of the manufacturers of starch and other products of corn. His reply was distinctly reassuring. Said Mr. Hosking:

"Paper makers may rest easy as to their starch needs, and, for that matter, so may other industrial users of this important product. And for two reasons of a fundamental kind:

"First, starch is made from corn, our largest grain crop. Last year the corn refiners used only about 4 percent of the crop; that is, 130 million bushels out of a total of over 3 billion. So, there is plenty of raw material round for starch making purposes.

"Additional assurance is the fact of essentiality—meaning that starch is a 'must' in the manufacture of many items in the armament program. For example, cotton textiles in vast amounts are being ordered by various armament agencies, but without starch for warp sizing the cotton looms would stand silent.

"Another instance is the metal casting industry; without starch for core binders casting operations would stop, or at best yield an inferior product.

"There is a long list of such items, and since the authorities are well advised of the situation, it is not likely that any interruption of starch production will occur.

'In view of these fundamental facts, I should think paper makers might well relax in respect to at least one of their worries."

Rosin—Rosin Size

In the last war, 1941, our country had a large supply of rosin under C. C. C. control, probably better than 2 million drums. Prices were about $2.00 per hundred pounds. During the late war period, stocks quickly disappeared and the paper industry, among others, was allocated on a basis of 70 percent of its use. This forced the paper mills to go to substitutes to produce paper. At the present time, stocks of rosin are not large. Supplies under the Government loan program are less than 300,000 drums. Domestic production never got back to the rate prevailing before the war, namely, production in the 1950 year was around 800,000 drums of rosin against 1,400,000 during the late thirties. Production of wood rosin, on the other hand, has increased considerably. Wood production has gone up from around 800,000 drums to a total of over 1,400,000 drums annually. In other words, the

wood volume is about equal to the former gum volume and the over-all picture is not too far from what it was before the second world war. Prices, however, have very materially advanced. From the level of $2.00 per hundred pounds in 1941, rosin is now selling close to $9 per hundred pounds. This price has been encouraged by Government support efforts through the Department of Agriculture.

Should an all-out war occur in 1951, we would see a much greater production of wood rosin and probably a leveling off on gum but the over-all production would probably be approximately sufficient to take care of our requirements here with a fair amount for export. Prices would be very strong. An early control of the use of rosin in the consuming industries, such as the paper trade, would occur.

Chemical supplier states: It is estimated that in 1950 the production of aluminum sulfate hit a record high of about 700,000 tons. The 1951 production will be affected by the supply of sulfuric acid, but it is expected that it will duplicate or exceed the 1950 record.

The principal uses of aluminum sulfate are in the treatment of water, and in the manufacture of paper. Both uses are highly essential in times of peace and war.

No serious shortage of this product was encountered during the last war, although a special grade, Victory Alum, made its appearance for a short period of time. It is expected that there will be no necessity to revert to that grade in the foreseeable future.

New and enlarged facilities for the manufacture of aluminum sulfate were added in the last few years. The present shortage of sulfur is curtailing the supply of sulfuric acid, which is one of the principal raw materials entering in the manufacture of aluminum sulfate. However, the manufacturers will do everything possible to satisfy the heavy demand for this material.

A dyestuff manufacturer states: In any attempt to forecast paper industry production and the demand of the industry for dyestuffs and other related organic chemicals, emphasis must of course be placed on the national and international political situation. If the present uncertainties on the international front could be resolved in one way or another, the entire production situation could be readily stabilized. At the present writing we are assuming full scale production of paper and paperboard both for the military effort and for civilian uses for the duration of the year.

Due to peak demand during the last half of 1950, dyestuff stocks were fairly low at the start of this year. The raw material market is in a highly confused state: those chemicals ordinarily regarded as starting points for the industry, such as benzol, phenol, naphthalene, anthracene, and others are normally obtained as by-products from the coking of coal as well as from the relatively new petroleum chemical industry. Many of these raw materials are also being drawn on very heavily by the munitions and plastics industries as well as for synthetic rubber production. Again, many basic heavy chemicals, not normally considered as entering dyestuff manufacture, such as sulfuric and hydrochloric acids, chlorine, alkalies and various metals such as zinc, tungsten, and molybdenum are in extremely tight supply situation.

Since no coordinated program of allotments and allocations has been formulated by the appropriate governmental agencies, no definite production program can be set up for utilization of the available raw materials, and at the same time no accurate scheduling of shipments can be made for delivery beyond the immediate future.

As may be gathered from the above, supplies to the paper industry will necessarily be on a hand-to-mouth basis with no promise of being able to satisfy normal, much less increased, demands.

In furtherance of the defense effort, many mills are manufacturing papers which are essential in one way or another. Some of these orders are covered by DO ratings, others may be equally important but without ratings. Any such DO ratings or future replacements thereof should be extended to the suppliers of dyestuffs and chemicals so that the necessary raw materials may be obtained and deliveries expedited. Failure to extend such ratings will entail delays in deliveries unpredictable as to duration.

A dyestuff supplier states: There is no doubt that some dyestuffs will be short and that shortages will become more accentuated as the year goes on. Numerous of the raw materials going into the manufacture of dyestuffs are needed for more urgent defense needs but, notwithstanding the above, no mill should be forced to shut down or curtail operations due to the lack of a particular dyestuff. We have found from experience previous to World War II and during World War II that, where one dyestuff was not available, the shade could be satisfactorily worked out with another dyestuff which was at that time available. Of course it means shifting formulas from time to time but this worked no hardship on any mill. It would be well for the paper mills to order their dyestuff sufficiently ahead so that if any delays do occur on delivery the dyestuff company in question will have ample time to work out a good replacement. I must reiterate that this can be done on most of the shades.

Machinery manufacturer states: Paper machinery builders today face a situation reminiscent of that which they faced in the 1941-42 period. I believe that the conditions which existed at that time, which led up to the complete elimination of any paper machinery building during the duration of the war, has led the mills today to a greater urgency in placing orders so that in general, the demand for machinery is greater today than it was at that time. This demand, coupled with a diminishing supply of raw materials, leaves the machinery builder in a position where he must fight for every item of critical raw material that he needs to fill his orders.

It would be impossible for anybody to project the material supply situation through to the end of 1951. If we are willing to venture a few guesses, we can do fairly well in estimating what will be the situation for the next three months.

I should say that for the next three months we will be able to get most of the materials that we need. We will be faced with harrowing individual shortages of pieces which will hamper final delivery but none of these will be insurmountable and we should be able to operate fairly well up to full schedule production. During this period we will see a diminishing supply of such materials as stainless steel, copper and aluminum, and in many cases will receive rejected orders or be told that schedules will be moved back.

I believe that all of this period will lead us up to a July 1st date, at which time the Government will have prepared their organization and controls to such a point that we will step into a controlled materials plan such as the one under which we operated during the last war. This plan will result in an allocation of all critical materials so that no more materials are allocated than the available supply. This will serve the final purpose of making it easier to get what we are allocated and making it easier for us to know what we can expect to get and what percentage of operation we must get used to in our planning. In other words, if our critical supply of materials and the strategic value of new paper machines is such that we should be entitled to 75 percent of the materials we need for full operation, then we must either curtail our operation to that extent or obtain war orders to fill the gap. This situation will be less intolerable than the one where we are free to buy all we need but unable to buy it for reasons of supply.

Under this plan, we will know fairly well for each three month period what to expect and the policy of the Government will no doubt be based on whether we come into a total war or whether we begin to feel that the danger of immediate war is passing. At any rate, I can see no alternative to the fact that the tremendous rearmament program will be carried on regardless.

I haven't mentioned the word "substitution," and I am sure that this will be something that will receive increased attention. For example, our company has investigated the use of special plastic coatings to replace

stainless steel. Although not as good, certainly these are preferable to incompleted paper machines. We must replace aluminum in many cases. All strategic materials must be subject to scrutiny and we don't quite know what will face us, but we must be ready to make substitutions where necessary, with inferior but available products.

During the period of the last war our conversion to war work and back to paper machinery was very smooth and our greatest hope is that if the Government wants to have us convert again, it can be done with a minimum of dislocation to our schedules and the maximum of consideration for our customers' requirements. It is the nature of a war economy that somebody in a position to know must decide whether a company such as our own should build paper machinery, machine tools, marine machinery or something else vitally needed, and it is our job to do the best we can under the conditions that are set up for us.

Our great responsibility is to those many paper mill customers who have bought from us in the past and we are going to try to continue to serve them until the Government tells us we should be doing something else.

Clay supplier states: The year 1951 is expected to be a very difficult year for the Kaolin clays needed by the paper industry. Though capacity has been added to practically every producing plant, the continuing high level of paper operation may make it very difficult for each company to meet the demand for coating clays. There should be a reasonable supply of filler clays, but this, too, is dependent upon the percentage used in the final mix in combination with woodpulp or other cellulose products.

The tremendous gain in machine-coating operations and, therefore, the corresponding increase in demand for clays applicable to these processes is expected to create a shortage during peak periods of operation. All Kaolin producers will be subject to the limitations of critical materials and the maintenance of quality will depend upon their ability to procure vital processing material and equipment.

With the increase in defense operations, freight car shortages also may contribute to delivery problems later in the year. These problems should be anticipated wherever and whenever possible particularly by those buyers who have limited storage capacity. Generally speaking, the industry is in a very sound position insofar as productive capacity and material are concerned.

Starch supplier states: Outlook for *Cornstarch* is better than during World War II when supply was short. Producing capacity has expanded and the industry generally is better situated than at the beginning of that war. Currently the supply is just about in balance with demand. However, cornstarch is a soft commodity and a critical war material for food as well as for industry use in paper, containers, textiles, etc.; and as defense preparation gains momentum, there is a strong chance that we shall again see some cornstarch shortage. It is considered a critical war material.

Supply of *potato starch* is freely available. Production of both Maine and Idaho starch has been heavy, and large quantities of both are on hand. Prospects for Idaho product are bright, for Maine not so good. Government support ends with the current crop, and the factories will, come the Fall, have to be dependent on what can be culled from the table supply. Thus the Maine potato starch supply may not be bountiful early in the season.

Dutch potato starch is not now available at any price. Producers who ordinarily make tremendous quantities speak of extreme shortages. Potatoes have been needed for food and there are none for starch. None of the Dutch product can be had before the Fall.

Tapioca starch cannot be considered a market factor for the time being, partly because of high price and also because of small supplies. Brazilian supply for this season is exhausted. New crop is due late in May or early June. Javenese supply is limited and priced out of the market because of marked increase in demand from Holland, the result of potato starch shortages in that market. Supply of this grade should improve by July.

The small supply of Siamese grades is too high-priced and too coarse to interest this market, barring unforeseen tightening of our supplies. Product of this area is too greatly in demand for home food consumption to be counted on as a commodity for trade, that is, unless modern methods of production are introduced.

Review and Forecast for the Paper Napkin Industry

Arlo Wilson

Secretary-Treasurer, Paper Napkin Assn., Inc.

Following the general trend of paper production in 1950, paper napkin tonnage continued to expand in the past year. A sudden, sharp increase in demand during the summer months, following the start of the Korean campaign, helped spur monthly totals to new highs. Although some portion of this increase was undoubtedly due to "scare" buying, the reports for the last quarter of 1950 show an exceptionally high level of production, only slightly below that for the third quarter.

The substantially higher tonnage of paper napkins has been accompanied by a steadily increasing return per pound, pushing the dollar volume of the industry to new heights. The 1947 Census of Manufactures showed a dollar volume of $37,000,000 and, based on available preliminary information, the Paper Napkin Association estimates the 1950 dollar volume of the industry to be approximately $45,000,000.

Part of the increase, to be sure, is the result of the greater acceptance and use of the high-quality, cellulose napkins. The facial tissue type napkin, which has been the major post-war development within the industry, is looming as an ever-larger factor in the paper napkin picture. To the extent, in fact, that in the 1950 Census, for the first time, the Department of Commerce will ask for separate figures on tonnage of facial tissue type napkins.

What direction the tonnage volume of the paper napkin industry will take in the coming eleven or twelve months is uncertain and dependent on a number of contingencies. The prospect of a less-than-free market and spot scarcity of basic materials poses many problems which will have to be worked out between the government and industry representatives.

Barring full industrial mobilization for war output, the industry should maintain the level it reached in 1950 or slightly below. In the event of extreme emergency, the industry will cooperate fully and work for the most equitable solution for all concerned.

Canadian Possibilities 1951

Dr. Allan C. Hill

First Vice-President, Montmorency Paper Co., Inc.

Canada's pulp and paper industry went on to new levels of production in 1950 despite a somewhat slow start in the first quarter of the year when the effect of the devaluation of sterling and its satellite currencies on the world's trading patterns was not clearly understood. This statement scarcely appears newsworthy because of the annual appearance of such announcements over the past several years, but to observers both of the Canadian economy and the economies of other lands dependent on pulp and paper products from Canada, its importance is not lost.

In the present year the world markets will again look to Canada for a large part of their requirements of newsprint, of chemical and mechanical wood pulps and, to a lesser degree, of other papers and paperboards to assist in diverse ways to meet the production objectives of an expanded military program. To meet this demand successfully and to avoid hardship that might be caused by shortages of paper and pulps in traditional Canadian markets will require efforts as strenuous as any demanded of Canada's pulp and paper industry in the past.

Newsprint

A brief summary of 1950's production will serve to show the objectives to be reached and passed.

In newsprint paper manufacture, the largest single operation of Canada's pulp and paper industry, output exceeded production of the previous year by 102,000 tons, a gain of 2 percent. Actual production figures for 1950 (Newsprint Association of Canada) show 5,278,585 tons, and the increase represents the equivalent of the annual production of a modern two-machine newsprint mill.

Planned installations of new units for producing mechanical pulp and further increases in operating speeds of the newsprint machines should continue to make available additional supplies of newsprint in 1952, provided that deliveries of necessary equipment are not interrupted by defense priorities and that supplies of the necessary raw materials are adequate.

No one in our industry imagines that such production problems will be easily solved but much effort has already been made toward solutions. Of great importance is the procurement of an adequate wood supply, and while the recruitment of woods labor appears to be satisfactory at the present time difficulty is being experienced in obtaining the necessary railway cars for movement of wood from distant operations to the mills. It might well be that the upper limits of production in 1951 will be set by the amount of wood available to the mills, and the closest attention is being given to both aspects of the problem by the individual mills; however, it is still too early in the year to forecast the pattern of wood deliveries.

Transportation of the finished product could also turn out to be a problem and is being watched closely by the entire industry. The shortage of sulphur has been causing increasing anxiety and will be discussed further in this article; the provision of adequate steel supplies is also of considerable concern. Much depends on the raw material and labor requirements of a defense economy and provisions now being made for allocation of strategic materials.

Distribution problems also appear to face Canada's newsprint industry. Directly as a result of the devaluation of sterling and other currencies in 1949 shipments of Canadian newsprint to "soft" currency countries ceased altogether in the first six months of 1950, or remained at token percentages throughout the year; the industry was successful in increasing shipments to the U.S.A. to offset the loss of other markets, otherwise hardship might have been suffered by individual mills.

This situation is reflected in the 1950 statistics of the Newsprint Association of Canada. These show that while shipments of newsprint to the United States increased 8.3 percent, and deliveries to Canadian consumers rose 7.5 percent, shipments to other markets dropped 53.7 percent, or 241,000 tons. Late in 1950 it was apparent to many overseas markets that the supply of non-dollar newsprint would be insufficient to take care of what might be considered minimum demand of informed press, with the result that Canada has been subject to strong representations for aid. How the newsprint is to be found and where it is to be found would appear to be another of the insistent problems of 1951; since many of the markets in which newsprint is needed have long been supplied by Canada, one may be certain that such requests for assistance will be forcefully presented.

Wood Pulp

Canada's share of the world pulp trade was higher in volume in the year just ended than had been anticipated in the early months of that year. Shipments of chemical pulp to all markets exceeded those of 1949 by approximately 308,000 tons; United States shipments increased by about 350,000 tons, while shipments to other countries declined by nearly 88,000 tons, reflecting the effect of sterling devaluation in overseas markets. It is of interest to note that these chemical pulp shipments to the United States also exceeded those of 1948, the previous high year, but shipments to markets other than the U.S.A. and Canada showed a decline over that year.

Additional production from new installations which reached the market in 1950 played a significant part in the year's record deliveries and some addi-

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tional capacity is scheduled for operation in 1951.

Mechanical pulp shipments showed the effect of the much later recovery in demand for that grade, and although exceeding 1949 deliveries, dropped well below those of 1948.

The current demand for both chemical and mechanical pulps is being met as far as raw material supplies will allow. Due to the liquidation of pulp inventories in 1949 there was in most cases a liquidation of wood inventories at the producing mills, and a corresponding reduction of pulp wood receipts during the 1949-1950 season resulted. In cases where wood inventories dropped too low some production loss resulted which, unfortunately, could not be restored. Some anxiety at the present time persists as to wood receipts during the coming year, but it appears to be somewhat early to forecast the result.

The sulphur situation is causing a great deal of concern, however, to the sulphite pulp producers. Due to the recently announced general reduction in deliveries of sulphur under contract with the two principal suppliers during the current year, search for additional supplies both of elemental sulphur and of sulphur produced, from smelter gases, natural gas, and pyrites has been undertaken and may result in alleviating the situation somewhat. Improved recovery systems are being installed in sulphite mills to reduce the losses of sulphur dioxide during the sulphite cooking operation and, here again, some gain will result. Maximum recovery may require additional equipment fabricated from steels already in short supply, and cannot be counted on to assist in reducing the short position.

There is a strong belief that the scarcity of sulphur is caused by the lack of discovery of new deposits and might continue for an indefinite period unless present explorations are successful. There is said to be much activity on the Mexican Gulf Coast where several domes are being investigated but thus far no announcements of discoveries of new sources of supply have been made.

Unless and until the occurrence of new deposits of sulphur have been proved the Canadian industry has no alternative but to encourage all economically feasible sources of this raw material. Since costs of sulphur from new sources may be higher than those to which the pulp industry is now accustomed, the more general application of modern chemical engineering principles to the recovery of sulphur dioxide during the sulphite cooking process will follow.

The availability of chlorine for bleaching and for water treatment is considered to be satisfactory for a normal demand of the pulp and paper industry following the difficult situation of last year. It is believed that most bleaching mills were able to contract for their full requirements for 1951; undoubtedly the situation was helped considerably by the new chlorine plant installed at Peninsula, Ontario. Allocation of chlorine for defense industries would of course reverse the whole situation.

The demands of the trade that pulp quality be maintained at a high level was recognized throughout the pulp industry last year; quality factors have been kept at a high level and it is expected that they will continue at this level unless the pressure of a raw material shortage forces their reduction. This pressure could come from shortages of chemicals such as sulphur and chlorine, and most importantly of wood.

The more insistent demand at this time is quantity and every effort is being made by the pulp producers in Canada to see that this demand is met.

Other Pulp and Paper Products

Last year saw a significant increase in production of so-called "other pulp and paper products"; products included paperboard, wrapping, tissue, book and writing and other papers. Although not nearing in volume or total value the production of newsprint and market pulps they have shown a good rate of growth. Some new paperboard capacity was installed in 1950 which showed a growth in production up 9 percent over 1949 and up 3 percent over 1948, a previous high.

Book and writing papers increased 8 percent in volume, tissue papers by 8 percent and wrapping increased 12 percent, all over 1949's figures.

Much of this growth was to supply the domestic market but some was exported to the world markets, thus reversing the trend of the previous year.

It is confidently expected that one of the long term trends in Canada's paper industry will prove to be the export markets built up for papers other than newsprint, particularly in the paperboard, book, wrapping, and tissue fields. Significantly enough the proportion of newsprint to total production has been dropping since the big expansions of the late Twenties and early Thirties and now stands at 58 percent while market pulp has grown to 25 percent of the total Canadian production, and the "other papers" to 17 percent. All this growth has been at a time of new newsprint machine installations, machine speed-ups, and a generally expanding newsprint industry. One can only speculate as to the effect on this segment of Canada's paper industry of a reduction of tariffs on such papers entering the United States but undoubtedly such a revision of duties would result in an expansion of those products which the industry is in a sound position to manufacture and market. It would appear that progress in this direction, while slow, will nonetheless be sure.

Summary

Nineteen fifty one is a year in which it is extremely hazardous to make production prophecies of any kind. However, given favorable conditions production of Canadian pulp and paper industry should exceed that of 1950. New pulp installations are already under construction and should be producing additional supplies of pulps in 1951; the policy of increasing the production of existing newsprint machines initiated some years ago is continuing. Several disturbing factors have already been pointed out. Full operations depend primarily on adequate wood supplies, and these in turn depend on the availability of woods labor. Some feel that this factor will be the most important in determining Canadian output of pulp and paper products in 1951. In addition, the transportation situation both for wood and for finished products is causing some concern and is extremely tight at the present moment. In the case of sulphite mills there appears to be a long term problem of sulphur availability which will have to be solved to assure full production. There are no indications that these problems will not be solved.

N.P.A. NAMES TICOULAT

WASHINGTON, D.C.—Appointment of Gabriel J. Ticoulat, Crown Zellerbach official, as director of the Pulp, Paper and Board Division of NPA, was announced this week.

He is vice-president of Crown Zellerbach Corp., San Francisco, Calif., and president of two Crown Zellerbach subsidiaries, the Comfort Paper, and Silklin Paper Corp., both of San Francisco. He is on leave of absence from his business.

Mr. Ticoulat's whole business carreer has been with the paper concern or affiliates. He is past president of the San Francisco Sales Managers Assn., and director of National Sales Executives, Inc.

OTHER N.P.A. APPOINTMENTS

WASHINGTON, D.C.—Appointment of John C. Pritchard, Denver business man, to head the N.P.A.'s Office of Small Business was announced last week.

Mr. Pritchard is a native of Walsenburg, Colo., and has been engaged at various periods in the building materials field, and is presently operating a wholesale millwork and steel fabricating plant. He has been interested in small business interests at the Commerce Department for some years.

Other appointments to NPA during the week included: John H. Hollands, Buffalo, N. Y., as general counsel; W. Walter Watts, as assistant to Defense Production Administration (he is a vice-president of Radio Corp. of America, with offices at Camden, N. J.); Edwin T. Gibson, a food company executive, New York, N. Y., as deputy administrator for staff services.

The Role of the Pulpwood Industry In Industrial Mobilization*

D. C. Everest[1]

Chairman of Board, Marathon Corp., Rothschild, Wis.

In dealing with the subject assigned me for discussion this morning, "The Role of the Pulpwood Industry in Industrial Mobilization," I think it is necessary to review the situation as to the products in which pulpwood is used.

Primarily, pulpwood is the basic raw material for all paper and paperboard production. In discussing this matter, I want to emphasize one statement I have made several times before, but which I do not think has made too much of an impression on my listeners. It is, "there is no economic substitute for paper and paperboard." In fact, in a great majority of the cases in which these products are used, there is no substitute for paper and paperboard (period).

The difficulty in making people realize the importance of the paper and paperboard industry in the past and for a considerable period of time was that the industry had kept pace with increased demand and had been a little in advance in expanding its manufacturing facilities to provide an adequate supply of its products for all users. Due to the foresightedness of the industry, no one had to worry much about securing paper and paperboard until about ten years ago, when we were faced with a situation not unlike what we have today. When goods of any kind are in adequate supply, no one gives any thought as to where these products come from nor to the whole complex business of getting raw materials necessary to produce these goods. Within the last eleven years this whole situation has changed so far as the paper and paperboard industry is concerned. With the great increase in population, plus the enormous development in new uses, the expansion of the productive capacity has not kept pace with the increased demand. Now we are again faced with a further demand for war preparedness superimposed on an all-time high demand for civilian use.

While the value of the products of the industry rate it in sixth place in relation to the whole national economy, it is difficult to make some people understand that so far as essentiality in the national economy is concerned, it stands out in the number one position like a lighthouse in a fog. No industry nor any other functional institution, including government, can do business for a single day without the products of the paper industry. When you study the importance of the pulpwood industry in any mobilization effort, it not only applies to the paper industry but extends into the fields of textiles, explosives, and a hundred and one other essential items in which dissolving pulps made from pulpwood are utilized.

I doubt if there is any other essential industry, and particularly those we think of as basic industries, which has such a complex involvement with all the other requirements of a mobilization program. It, being founded on the use of chemicals, is wholly dependent on the amount of chemicals provided for it, particularly sulphur, chlorine, caustic, and soda ash, all of which are in short supply. We, in the industry, are concerned with one thing: fibrous materials from which to manufacture our products. To put it another way, we need cellulose fibre. We get this supply from two sources:

1. From wood. On account of the purpose for which it is used, we call it pulpwood. Pulpwood is used in the manufacture of primary mechanical and chemical pulps, sometimes classified as virgin pulps.

2. From the recovery of waste papers and rags which are reused and thus augment the supply of cellulose available from which to manufacture paper and paperboard. This is an important item as a raw material in meeting our ordinary requirements and is, of course, greatly accentuated in meeting any accelerated national requirements.

Whatever I may say in relation to our needs in the production of pulpwood applies equally as well to the collection, assorting, baling, and ultimate delivery of waste papers and rags.

As I see it, the role of the pulpwood industry is the most vital to the successful operation of any mobilization effort. It is basic to all communications, records, specifications, contracts; in fact, the military forces and every other agency having to do with mobilization is impotent without paper.

It is rarely ever that one has an opportunity to discuss this matter with representatives of all of the agencies of government which are charged with the successful operation of the industrial and military mobilization program. It does give one a chance to attempt to explain how everything termed "critical" has its impact on the ability of the industry to perform.

The representatives of the six agencies which have direct contract with this industry, viz., National Production Authority, Economic Stabilization Agency, the U. S. Employment Service, the U. S. Forest Service, the U. S. Selective Service and Economic Cooperation Administration are all here today and I would like to outline, as best I can, the problems I foresee will arise and which will require frequent contact with these several agencies.

The National Production Authority, as the overall agency charged with raising production to the maximum of every essential thing, will have a difficult job. It is the biggest job in the world and with all the "ifs" we have in the present crisis, it will be impossible to foresee all the things which must be done due to the rapidly changing conditions in "requirements" which must first be outlined to N. P. A. by the military. No one can say he will meet requirements until he knows definitely what the requirements are. Too many people have gotten into trouble in mobilization programs by loudly proclaiming they can supply the universe before they know how much the universe needs.

As I see it, the paper industry will occupy a dual role under N. P. A. It will be a "claiming agency" on many of the products of many other industries and will also be the "supplying agency" for hundreds of industries which will, in the course of events, make claim on it for paper and paper products. As I have pointed out before, when I speak of paper or paperboard or any of the products made therefrom, I am thinking of the pulpwood industry, which is the primary raw material supplier. You can't have one without the other.

Basically, without going into detail as all of the statistical data is available to the several agencies, the United States consumption of paper and paperboard has increased from a controlled consumption figure, for the years 1942 to 1945, inclusive, of 19.7 million tons to somewhere between 29.25 and 30 million tons in 1950. This means 50 per cent increase in the annual consumption in five years. Allow-

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* Presented before the Seventeenth Annual Meeting—American Pulpwood Assn., February 20, 1951, Waldorf-Astoria Hotel, New York, N. Y.

ing for substantial cutbacks in civilian consumption, but taking into consideration increased demand due to mobilization, we are confronted with a task much greater than in World War II. Whatever the variations are in either civilian or military use, we know now that we have to do more than provide the 19.7 million tons of straight line consumption of the previous war years.

No miracles have happened in the industry within the past five years relating to the production of pulpwood. It still requires men, materials, food stuffs, equipment, and transportation to produce and deliver pulpwood to the point of utilization. I do not think that statistics showing the use of these several items in producing pulpwood for the years 1949 and 1950 are a true index of future requirements, as in both of these years consumption exceeded production with the result that inventories in the hands of pulp manufacturers are considerably below those at the end of 1948. In those years we were drawing on reserves and therefore not using as many men nor as much supplies and equipment to maintain the required rate of pulpwood production and to provide anything approaching adequate working inventories. In some sections of the country, the production of pulpwood is geared to seasonal operations. Production will depend on the timing of mobilization plans, when the necessary acceleration will be felt by the pulpwood industry. My guesstimate is that to meet demand in 1951 and maintain a working inventory, it may require as much as 30 to 40 per cent increase in men, materials and equipment to accomplish this. Competent committees are compiling data relative to anticipated requirements; Manpower is most essential and, due to the fact that most of the pulpwood production is in coastal areas in which shipbuilding plants and other war plants will be located, there is bound to be keen competition for the available manpower supply. Bright lights, exceptionally high wages and possible freedom from military service, attract those normally employed in the woods. Unless men are frozen to their jobs, it is going to be extremely difficult to hold men in the woods to produce the necessary pulpwood requirements. The industry has done much to mechanize its operations and is constantly engaged in research to devise other labor saving equipment, but it still needs men and particularly in small operations which are not utilizing mechanical equipment to the fullest extent. Wages must be maintained to meet competition.

All of the pulpwood industry's requirements to meet production needs run head-on into mobilization and preparedness requirements. Our problems will involve U. S. Employment Service in securing and holding necessary manpower. This problem may overlap and to a large extent be controlled by U. S. Selective Service. In the South, particularly, we may be hampered by age limitations controlled by U. S. Department of Labor regulations.

We also have a rather complex problem involving the Economic Stabilization Agency and the U. S. Forest Service. In a recent discussion with governmental representatives of costs and price stabilization, the effect of stumpage price on pulp prices was brought up. As I see it, if we are to produce the necessary pulpwood required by the mobilization program, we must depend on timber from the forests controlled by the U. S. Forest Service and other governmental agencies. Under ordinary circumstances, no one can blame those in the U. S. Forest Service, charged with making timber sales, for getting all they possibly can for the stumpage, as this money can be used by the Service in its operations. When waves of economy hit the Congress, the Service has difficulty in securing adequate appropriations. Lately, there has been what looks to me as a wholly unjustified tendency on the part of purchasers to make crazy bids for various species of timber in widely separated regions of the country. No one can pay $51 per 1000 board feet for pine stumpage in the Pacific Northwest without it being reflected in the price of lumber, no one can pay $19 plus per cord for spruce pulpwood stumpage in the Lake States area without it being reflected in the price of pulp.

Recent newspaper reports indicate that sales of National forest timber have been halted, until a price formula can be determined. The price should not be set on the basis of some of the crazy bids and sales made recently or we will be in for inflation, and no fooling!

There are two things which I think should be definitely understood about the wood supply in this country and how it can be made available in a national emergency. First, the pulpwood industry requires approximately 9 per cent of the annual drain and withdrawal of the timber available, whereas fire, insects and disease take 11 per cent. This leaves 80 per cent of the annual wood removal from the forests for lumber and all other wood products. Privately owned forests currently supply nine-tenths of the domestic wood supply. Federal, state and local governments own 43 per cent of the volume of timber; the balance of 57 per cent is on private ownership. Of the privately owned timber, farmers hold title to about 27 per cent and industry owns 73 per cent. On this basis, industry owns 41.6 per cent of the timber in the United States. Viewing it for the long range industrial expansion program, which involves the national economy, we find that in nearly every instance industrially owned timber is the operating reserve behind some presently established industrial concern in which there are tremendous investments in both plant and timber reserves. Entire communities and much of the whole national economy is dependent on the continuity of operations of these industrial concerns.

Industry cannot be expected to make all the sacrifices. When, in an emergency and with the greatly increased demand for wood, we look for a source of supply—there is only one place to turn. While farmers' wood lots may supply some of certain species in several regions, they are not expected to be the source of large cordage. This brings us squarely up against the necessity of securing wood from federal, state and local forests. There are numerous places where these forests could be improved under good forest management practice. Much of the timber is mature or over-mature and should be cut, and in some other places thinning is desirable to promote better growth.

It is a sad commentary on the foresightedness of legislators to note that it has taken months to secure enabling legislation to salvage 2 million cords of pulpwood and a tremendous quantity of saw timber, resulting from a blow-down which occurred some time ago in the Adirondack region of the state of New York, because a group of sentimentalists once decided it was a crime to remove a tree from a forest and it should remain "forever wild."

Second, there are many other laws and regulations relative to U. S. Forest lands which hamper any quick action in an emergency. These regulations provide a long drawn out procedure for bidding for every lot of stumpage sold. It would seem to me that, as a sensible approach, these regulations should be suspended for the duration of the emergency and if price controls are made a part of the whole mobilization effort on a pegged or ceiling basis, then the same idea should be applied to stumpage on timber from federal and state forests based on species and accessibility within certain defined regions throughout the country. Certainly no one is more interested in the ultimate outcome of our mobilization program than government itself.

E. S. A. and U. S. Forest Service must work together with the industry if wood is to be provided and prices of pulp, paper and paperboard held on a sensible basis. This is equally true of our necessity of working with all of the government agencies. We need cooperation and coordination—and lots of both. Transportation is also highly important, as wood produced over a wide area is of no use unless it can be transported by truck, rail or water to the point of utilization.

Needless to say, our entire industry is affected by the activities of the Economic Cooperation Agency. This seems to be particularly true in the action taken by it in respect to shipments of sulphur abroad for the rehabilitation of the European chemical industry and also the proposed shipment of Canadian pulpwood to Sweden. It would seem there should be better coordination between E.C.A. and the agencies charged with the prosecution of the mobilization effort.

I do hold a brief for the pulpwood, pulp, paper and paperboard industries, as I think too few people recognize the extreme importance of them in a mobilization program.

The importance of pulp, paper and paperboard products in the current mobilization effort is as obvious as the importance of oxygen to every creature that breathes. Take pulpwood and its fibrous and cellulose products out of the picture, and mobilization's breaths would be short and few. Modern military action without pulp and paper is inconceivable—if not impossible.

Paper is the first commodity in mobilization—on it plans are made—with it plans are executed—of it vital products are manufactured.

It is paper that carries the instructions, the forms, the records in coordinating a national and international program. It is on paper that great expanses of terrain are photographed, then transferred to paper maps on which strategic military movements are determined. It is on paper that production relies for its blueprints. Estimates are that 15 miles of blueprint paper, or 37 tons, are required in planning a 35,000 ton battleship.

Cellulose from pulp provides the explosives for ammunition and the wadding for shells, as well as for the bandages and other medical and surgical supplies. From it comes rayon for war fabrics; cellophane, glassine, grease-proof and other protective materials for bags and wrappings for military and civilian food.

In paperboard containers, vital supplies reach fighting fronts and home fronts. With newsprint and book papers, the American public is kept informed on mobilization's requirements and status, and on the turn of events in fighting areas. In the final analysis, national morale in a free nation is dependent upon paper.

Pulp is the basic material that has brought communication from the smoke-signal stage to modern mass enlightenment, and made possible the development of thousands of new products for man's comfort and protection.

Recalling the vital role of pulp and its products in World War II gives some idea of their importance in mobilization. Think back on the tremendous volume that went into normal, established uses. Then recall the huge quantities required in producing materials used as substitutes that could release the maximum of less plentiful materials for the nation's most urgent requirements. Those days demonstrated most forcefully that paper and paper products can be a successful substitute for many things—but that there is, in turn, no substitute for paper. The present program envisages far more in requirements than did those of World War II.

The metals that are shot away and exploded, and the oil that is burned, can never be recovered. The pulpwood that is taken out and sent to war can be replaced, provided common sense is used in harvesting it. Through sensible forest management, we can grow more and more wood in our forests as many are doing today, because timber is a crop. Thank God wood is a renewable natural resource.

The forests of this nation, and particularly the privately owned forests, have met every demand made upon them in war and in peace, and they are in better condition today than they have ever been. There is every reason to know that they can meet today's requirements without jeopardizing tomorrow's. We must be permitted, however, during the emergency and as an established public policy for the future, to draw timber from all forest lands. We must also have a definite public policy relating to protection from fire, from insects and disease, and from any other thing which affects the reproduction of trees as a crop. Water and soil conservation are the vital elements entering into reproduction of wood. Wise management and efficient harvesting, regardless of the land ownership, is the fundamental basis of meeting the wood requirements of the mobilization program and the future supply of the industry, which is nothing more than the welfare of the country as a whole.

Condensation of Papers Presented Before American Pulpwood Ass'n.

MARSHALL PLAN COUNTRIES NEED CANADIAN PULPWOOD

Joseph E. Atchison, Chief of the Pulp and Paper Branch of the Economic Cooperation Administration in Washington, D. C., gave a clearcut statement of the manner in which E.C.A. funds are administered. He stressed the fact that E.C.A. does not actually give anything to European businessmen.

All the goods which we finance for shipment to Europe are paid for at the going prices by those who receive and use them. Within each foreign country receiving Marshall Plan goods the individual company or party pays the full price for them in the currency of that country. This money is deposited in what is called a "counterpart fund" in that country. This fund is then used or released subject to E.C.A. approval to pay for projects which benefit the country as a whole from either an economic or defense standpoint. In this way, Mr. Atchison explains, each E.C.A. dollar does double duty; first in the purchase of commodities, and second through the use of counterpart funds in local currency to provide needed facilities within the individual countries.

He explained to representatives of the Pulpwood Industry in this country that recent purchases of pulpwood in Canada are highly essential if Europe's free press is to be supplied with adequate newsprint to spread the gospel of the free world. He stressed the fact that he believes that European purchases of pulpwood in Canada, whether financed by E.C.A. or not, will continue for many years. This is so, he maintained, because there just is no other source of softwood pulpwood available to make up for the loss of shipments from Russia and its satellites

PULPWOOD PRODUCTION NEEDS ATTENTION OF TOP MANAGEMENT

T. N. Busch of the International Paper Co., Mobile, Ala. suggested that the top management of pulp and paper companies is not giving adequate consideration to the importance of pulpwood production to the Industry. Mr. Busch, who has had outstanding experience as a logging and pulpwood production engineer, pointed out that in the woods the manpower requirements to produce and deliver a cord of pulpwood to a mill are for the most part the same today as they were 10

years ago, but in the most modern mills they have been able to reduce their manpower requirements by one-third or more during the same period.

He suggested that it is about time that the management of the pulp and paper companies took stock of the situation in regard to pulpwood and determine what portion of the 45 per cent increase in pulpwood costs can be attributed to inefficient operation and what portion can be charged to the general increase in cost of all commodities during this period. He suggests that the Pulpwood Industry must learn ways and means of handling their inventories in such a way that the operators producing the pulpwood can reduce the size of their organization so that the people concerned can equip themselves properly and make a more stable income instead of working on a feast and famine formula.

He points out that in dealing with pulpwood, the Industry is not doing a good job of materials handling. Much of the pulpwood is loaded in a fashion which makes Mr. Busch think of pictures he saw several years ago in a "National Geographic" magazine showing Chinese coolies carrying dirt in baskets to make a huge fill on the Burma Road. He stresses the fact that in this country pulpwood can be loaded in trucks, barges and certain classes of railroad cars by mechanical power. By so doing, you do more than a mere job of loading, you conserve manpower and transportation equipment.

DISCUSS MOBILIZATION WITH PULPWOOD MEN

H. E. Brinckerhoff, executive secretary of the American Pulpwood Assn., expressed pleasure at the cooperative manner in which government agencies are working with him. Representatives of six different federal bureaus primarily concerned with the mobilization efforts of the country are participating in these discussions which deal with "The Role of the Pulpwood Industry in Industrial Mobilization."

Alfred E. Fivaz, Chief of the Primary Forest Products Section of the National Production Authority, outlined the plans of the National Production Authority as they may affect the pulpwood industry. Walter J. Damtoft, newly appointed Deputy Director to the Chief of the Forest Products Division of the Economic Stabilization Agency, represented that organization in a brief discussion of the relationship of that organization and the pulpwood industry.

The other government agencies were represented by C. N. Granger, U. S. Forest Service; Col. R. J. Bassidy, U. S. Selective Service; and J. G. Lafferty, U. S. Employment Service. On the same panel the pulpwood industry was represented by the following men: D. C. Everest, Marathon Corp.; G. L. Snowden, The Mead Corp.; C. O. Brown, International Paper Co.; E. B. Hurst, Consolidated Water Power and Paper Co.; and E. O. Ehrhart, Armstrong Forest Co. The moderator of this panel and chairman of the morning session was M. H. Collet of West Virginia Pulp and Paper Co.

TEXTBOOK COMMITTEE REPORT

The Joint Textbook Committee is happy to report that the first of the four volumes on the new series entitled "Pulp and Paper Manufacture" made its appearance last September. The McGraw-Hill Book Company—the publishers—are proud of this fully up-to-date work entitled "Preparation and Treatment of Wood Pulp." It is a beautiful and authoritative book without a rival or competitor in the world-wide field of pulp and paper making. Many willing contributors, skillfully guided by the Editor, made possible this book of 1043 pages and more than 300 illustrations. It is estimated that authors and reviewers of manuscripts devoted over 8,000 hours to the project. The Committee deeply appreciate their invaluable help.

The same generous cooperation insures a correspondingly complete production of the other three volumes, progress on which is follows:

Volume 2 "The Preparation of Stock for Paper and Board" has been in the Printer's hands for some months. The chapters are: 1. Treatment of Rags and Other Fibres; 2. Processing of Waste Papers for Boards and Printing Papers; 3. Beating and Refining; 4. Fillers and Loading; 5. Sizing of Paper; 6. Coloring of Paper.

Volume 3 "Manufacture and Testing of Paper" is complete except for parts of the chapter on Papermaking Machines. The tremendous job of making the many new illustrations for this volume has been proceeding for several months.

Volume 4 "Auxiliary Pulp and Paper Mill Equipment." The manuscript and drawings are well toward completion.

No prediction is possible as to the exact date when these volumes will be on the market, but every effort is being made to produce them as rapidly as circumstances permit.

The Committee would be remiss, did it not once more record its appreciation of the patient, untiring and exceedingly capable editorship of J. N. Stephenson and the splendid cooperation of the McGraw-Hill Book Company throughout the thirty-two years since the pulp and paper industry of North America initiated an educational project that success of which has far exceeded the expectations of the little group which met in Buffalo, N. Y. in September 1918.

The Committee consists of the following: G. E. Williamson, Chairman; R. S. Hatch, Douglas Jones, H. S. Spencer, R. S. Kellogg, Secretary, and J. N. Stephenson, Editor.

PAPER & BOARD ELECTIONS

The annual meetings of the Specialty Paper and Board Affiliates were held at the Waldorf-Astoria on January 24 and 25.

At the general meeting reports were made by retiring president, A. K. Nicholson, and by the secretary-treasurer. New officers and members of the executive committee were elected. In addition the members were addressed by Harold E. Holman, Chief of the Forest Products Division of the National Production Authority; E. G. Amos, assistant executive secretary of the American Paper and Pulp Association; and Harold E. Wright, Consultant to the National Production Authority.

The results of the election held were as follows:

President, F. Henry Savage, International Paper Co.; vice-president, A. P. Mitchell, Riegel Paper Corp.; secretary-treasurer, G. D. Cook; A. K. Nicholson, Hollingsworth & Vose Co.; Walter B. Sheehan, Missisquoi Corp.; Samuel B. Sutphin, The Beveridge Paper Co.; J. B. Cowie, Hollingsworth & Whitney Co.; Harold E. Wright, The Champion Paper & Fibre Co.; Frank Ash, Oswego Falls Corp.; Malcolm B. Lowe, Lowe Paper Co.; J. N. Logan, Newton Paper Co.; Walter A. Lowe, Falulah Paper Co.; Graham Blandy 2d, American Wood Board Co.; C. J. Nicol, The Sorg Paper Co.; J. P. Lewis, The J. P. Lewis Co.; Carlton A. Denny, St. Regis Paper Co.; Ferdinand R. White, Union Mills Paper Mfg. Co.

At the group meetings held January 24 the following were elected as chairmen:

Bogus Bristol Group, S. B. Sutphin, The Beveridge Paper Co., Indianapolis, Ind.; Tag & File Folder Group, A. P. Mitchell, Riegel Paper Corp., New York, N.Y.; Sanitary Food Board Group, J. B. Cowie, Hollingsworth & Whitney Co., Boston, Mass.; Coated Tag Group, Malcolm B. Lowe, Lowe Paper Co., Ridgefield, N.J.; Mill Blank Group, Walter A. Lowe, Falulah Paper Co., Fitchburg, Mass.

SOUND-COLOR FILM

"Paper, Pacemaker of Progress" is a 16-mm. sound color film produced by F. C. Huyck & Sons, manufacturers of papermakers' felts, Rensselaer, N.Y., which the firm will lend, free, upon request for showing to paper mill groups, schools, churches and service clubs. Running time of the film is 28 minutes. The film will be shipped express collect and is to be returned to the Huyck company express prepaid.

Effects of Paper Imports*

D. K. Brown

President, Neenah Paper Co., Neenah, Wis.

I thought I had given my swan song to this group a few years ago, but, due to the persuasive ability of your Executive Secretary, I agreed to make one more appearance.

The topic assigned to me may not seem too important at the moment, especially in view of the besetting problems confronting the industry today, but just as in peace we should prepare for war, so perhaps in a time like this we should prepare for peace and get ready to protect and preserve our domestic economy when the present emergency is over.

The International Trade Organization was a product of the United Nations, the Charter therefore being adopted two years ago by fifty-three nations at a meeting in Havana, Cuba. Its purpose seems to have been to hamstring America without our knowing it. The procedures at the meeting were far from our American way of Congressional debate and public discussion, the proof of which is that when the Charter was submitted to Congress a year later it was practically ignored.

However, let us not be misled into believing that further raids on the American market will be lacking, or that plans for more tariff reductions have been abandoned. The Administration went on record some months ago by saying that special legislation would be requested to continue and enlarge general agreements on tariffs and trade now in effect between this country and more than thirty other governments. Further proof thereof is House Resolution No. 1612, presented January 17 by Representative Doughton of North Carolina, asking that these agreements which expire in June be extended for another three years. In the light of present day cooperation by so-called friendly nations, three years is far too long a period for us again to commit ourselves.

Further, the recent special report, entitled "A Blueprint for Future U. S. Foreign Economic Policy," which proposes drastic changes in the Nation's tariff program, is additional evidence of what we may expect. Fortunately, the United Nations discovered they could not abuse this country without the consent of Congress; though in asking for a renewal of the Trade Agreements Act, the Administration called it the cornerstone of the program to reduce barriers to world trade.

The extension of this Act means a battle by industry groups who fear a further approach to free trade and a consequent deterrent to our industrial prosperity. If we are to survive over the years to come, our industry had better start forming its battle lines now to see that our representatives are kept constantly informed of the dangers to the communities they serve and the industries that support them.

The expressed objectives of the United States have been to avoid competitive tariff raising, to minimize quantitative restrictions and discriminations so that the exchange of goods may work to the benefit of all nations. However, unforeseen events have made these hopes difficult to attain. New schedules of duties had been put into effect in late 1949 and early 1950, and the opinion expressed at the Torquay Conference was that significant improvement in the competitive position of foreign goods in the United States market had resulted from these previously negotiated duties.

In fact, the improvement in some cases had been so marked as actually to cause alarm and resulted in some requests for withdrawal of duty concessions. While the escape clause of the agreement was only used once by the United States insofar as Europe is concerned; namely, to raise the duty on felt hats, yet Europeans accused us of not being willing to play the game when it was tough going. Let us not forget that the majority of the countries involved have become past masters in dividing what the other fellow has got, and we can take credit for educating them in this respect.

Let us also remember that the so-called dollar shortage that has prevailed in Europe for several years has been greatly relieved, and we know full well that exchange values and the manipulation thereof have been used to our detriment in the past, especially when not controlled at a definite relationship to the dollar and allowed to fluctuate during the life of a tariff agreement. In fact, exchange values can be more difficult to contend with than the shifting role of tariffs themselves.

When our State Department goes so far as to acknowledge the possibility of their program for increased international trade *resulting in unemployment and perhaps crippling certain industries*, with the further possibility of putting employees on relief rolls until they can be moved to other industries and communities, then it is time for us to get up on our hind legs and let our representatives (both state and national) know what the score is. I don't believe we want the pulp and paper industry to be liquidated or even partially sacrificed on the altar of international well-being as was the case at Waltham, Massachusetts.

Much propaganda prevails today as well as pressure to have the United States Senate approve the International Trade Organization Charter and yet it is doubtful if a majority of Congress understand it and the implications thereof. For instance, each nation signatory thereto would have an equal vote with all others, or, to be specific, our vote would be equal to that of Chile, Cuba, or Finland. The Charter would give authority to allocate production as well as fix prices, and could mean that if pulp was in short supply in the United States it could be allocated to any applicant in foreign countries at a price determined by the international organization. This could also apply to paper or pulpwood.

While it is true the Senate would not pass the Havana Charter, yet the proponents thereof are trying to sell it or parts of it under different names. For example, they have incorporated part of their recommendations in proposed changes to our customs law. Further, supporters of the Charter have been, and are, trying to have some of its repugnant features incorporated in the extension of the Trade Agreements Act, or issued by Executive Order.

A proposal was even made that we buy our own domestic pulpwood, ship it to a foreign country where it could be manufactured into pulp and paper and then return the paper to this country duty-free to compete with our own products. Our industry has no quarrel with the argument that we must have more international trade if we are to have peace among nations and we realize that we cannot continue to export unless we import in sufficient volume to create the necessary dollar exchange.

* Statement at Open Industry Meeting of the American Paper and Pulp Assn., The Waldorf-Astoria, New York, N. Y., February 22, 1951.

However, our industry has done more than its share in this respect. In the ten years preceding World War II, no other industry came near equaling paper and pulp in the creation of dollar exchange. During that period the net dollar exchange created by the absorption of imported pulp and paper was $1,635,000,000. Total imports were $1,965,000,000 and exports only about $330,000,000. The United States paper market in 1948 alone absorbed imports of pulpwood, wood pulp, papermaking materials and paper amounting to over $750,000,000. These imports were the largest for any single industry or commodity in the United States.

I know you are all busy and I want to make this report as short as possible. I also know that the subject may not seem too important in the light of current national problems and yet I feel very strongly that when the future of our industry may be at stake and the State Department can of itself practically control our destiny, then it is time for us to do something about it.

We are really a home-town industry with more than half our investment located in towns wholly or laregly dependent on the business developed through these mills. In fact, over one-half of the units are in communities with a population of around 10,000 or under, and the largest percentage of primary manufacturers are in locations estimated to be from 70 per cent to 100 per cent dependent thereon. The question, therefore, is "What can we do about it?"

1. We can let it be known that we are not objecting to the creation of an International Trade Organization as such which, if properly directed, might conceivably bring about effective multilateral action between the nations of the world, but that we are *unalterably opposed* to the Havana Charter itself, which is full of wishful thinking, gives the State Department too much power without proper industry representation, and has many dangerous implications.

The way to do this is through our elected representatives to whom even the State Department will listen if sufficient interest is aroused. We can insist that the levying of tariffs is a constitutional prerogative of Congress and that we do not think *that* power should be given in blank check form to any other branch of the Government.

2. We can enlist the support of labor, whose homes as well as bread and butter are at stake and whose representatives can make themselves heard in high places. If we are to protect American wages and the American standard of living, we must see that goods produced in foreign countries where raw materials are in abundance and where wages are approximately one-third of ours are not allowed to come into this country at prices way below our cost of production.

3. We can give the facts to our local communities through the Chamber of Commerce and similar organizations so they in turn may help educate our citizens as to the danger and pitfalls which may beset our national economic life. If we make a real start at the local and county level, it will rapidly gain momentum towards our state and national capitals and thus help America retain the prestige and standards which have made it the industrial leader of the world.

4. We can be ready to support any proposals such as the reinstating of the peril point provision which was stricken out by the Eighty-First Congress, as well as other measures such as Senator Malone's proposal for an import fee which may be offered as a substitute for the Trade Agreement law.

I might add that since the writing of this report the House passed the Agreements Act Extension bill by voice vote, after adding several restrictive amendments, including a peril point provision which later was passed by a vote of 225 to 168, it being supported by 183 Republicans and 42 Democrats.

Other amendments included an escape clause to investigate claims of injury to American industry arising from a trade agreement, as well as bann concessions on foreign farm commodities at less than the domestic support price. It remains to be seen what the Senate will do regarding these amendments, especially as regards putting the necessary teeth

F. PAUL BIRK

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therein to provide for prompt correction of any injustice that American industries may suffer.

Personally, I am a little fed up with the large amount of American capital (whether Marshall Plan funds or otherwise) that are being used in European countries to replace antiquated machinery in paper mills, permitting some countries to double their capacity, the results of which will some day come back to roost on our own doorstep.

Let us all keep our eyes and ears open and *pull* together at every opoprtunity. Your Association will keep you informed and give you all the ammunition you need. Let's use it so that we don't all *hand* together.

Which Way American Economy?*

Phillip S. Ehrlich[1]

As businessmen today, one question is or should be uppermost in your thinking. That question is: in what direction is the American economy traveling? That, as I see it, is the most important question facing us today. Upon the answer, and I say this advisedly, depends the destiny of our America and the fate of the free world.

The United States has become the leading nation of the world as a result of American capitalism, known as the free or private enterprise system. This system has provided the American people with the highest level of security and prosperity ever known to man. This system has proved its ability to tackle squarely and to solve completely any crisis that it has ever faced. Yet, in spite of the very remarkable and continuing achievements of our free enterprise system, powerful forces now operating within our Government and in our country have undertaken to destroy and are in the process of destroying this system.

If the free enterprise system is to function properly — in fact, if it is to survive — it is essential that we preserve our competitive system which rewards individual initiative, work, efficiency and ability. Our economy has grown and prospered because dynamic, vigorous competition for the consumer market has always existed and has resulted in more and better products at cheaper prices.

It is incredible, but nonetheless true, that this economic system which is the most successful in the history of civilization, and has, within the last half-century, saved western civilization in World Wars I and II, is now engaged in a battle for survival.

Unless we take prompt action to preserve private enterprise, and unless legislation is enacted to permit its survival, there is grave and imminent danger that free enterprise will not survive another ten years, and concurrently with its destruction will come the nationalization of industry and the

WOOD PULP

NORDICUS INCORPORATED

500 Fifth Avenue, New York 18, N. Y.

CHEMICAL AND MECHANICAL

[1]West Coast Attorney

* Presented at the open industry meeting of the American Paper and Pulp Assn., February 22, 1951, at the Waldorf-Astoria.

socialistic state, with its planned and regimented economy. I need only indicate the disastrous results to England of this type of program.

If America is to be strong, if America is to be productive, if America is to be able to overcome the dangers now facing civilization, free enterprise must be perpetuated.

In order that there may be no question as to my attitude, I emphasize that while I am a firm believer in free enterprise, I am opposed to monopoly in any form, and to any other abuse of competitive freedom by business, labor, agriculture, or any other group in the economy. I am for effective competition, free of unnecessary and harassing governmental restrictions, management abuses, the tyranny of labor, agriculture, or any other segment of our American system.

Because of the irresponsible conduct of certain elements in industry, Congress enacted the Federal antitrust laws, including the Sherman Act, the Clayton Act, the Federal Trade Commission Act and the Robinson-Patman Act amendments to the Clayton Act. These antitrust laws were designed solely for the purpose of regulating, not regimenting, the orderly conduct of business. They were enacted as an instrument to preserve our free enterprise system. However, today the Government agencies charged with the enforcement of these antitrust statutes —principally the Federal Trade Commission and the Department of Justice —have interpreted and enforced them in a manner that is revamping and destroying our free enterprise system and creating a planned, regimented economy. The Government enforcement agencies have imposed upon these Federal regulatory statutes their own political, economic and social ideologies, which are at variance with our free enterprise system, and by so doing they are disrupting the system.

This threat to our economic existence results first, from the erosion of procedural due process in antitrust litigation, and, second, from unsound substantive interpretations of the antitrust laws.

Let us consider first the erosion of procedural due process in antitrust litigation. Procedural due process means simply the right to a fair and impartial trial, guaranteed to a litigant under the Constitution. The lack of procedural due process in economic litigation has robbed the litigant appearing before courts and administrative agencies of this constitutional right.

As part of this approach, when antitrust controversies are tried, in the first instance, before the courts and not the Federal Trade Commission, the courts have gone beyond judicial interpretation of the law, and have assumed unto themselves the right to decide economic principles governing any given set of facts. Further, the courts have developed a doctrine giving recognition, on appeals from decisions of the Federal Trade Commission, to the alleged "expertness" in economics of this agency. This makes the courts subservient to the so-called expert opinions expressed by the Federal Trade Commission in the field of economics.

As a result of this procedural approach to the antitrust laws, the courts and the administrative agencies have become our economic dictators. This constitutes one of the most shocking developments in American jurisprudence.

Under the Constitution, a citizen facing the run-of-the-mill criminal charge is presumed innocent until proved guilty beyond all reasonable doubt. However, in antitrust proceedings, the courts and the Federal Trade Commission infer criminal violations of the antitrust laws from facts of the slimmest character, therefore practically nullifying this presumption.

The presumptions upon presumptions which the courts and administrative tribunals are permitted to indulge in make it almost impossible for the economic litigant to be successful in any litigation with the Federal Government.

The courts and the Federal Trade Commission have determined in antitrust litigation that the ordinary rules of evidence, applicable in all other types of litigation, have little, if any, application in antitrust litigation. As a result, surmise, suspicion and guesswork are often accepted in lieu of facts as the basis for judicial action.

Further, it has been determined by the courts and the Federal Trade Commission that a violation of the Robinson-Patman Act may be established by showing what the Federal Trade Commission is pleased to call a reasonable possibility of injury to competition. This phrase, "reasonable possibility of injury to competition," has no objective meaning, and none can be given it by either courts or lawyers. Such interpretation makes the law no longer a catalog of rules of conduct, but a subjective game based on the particular viewpoint of the judge or agency having an economic controversy to decide. Accordingly, in many instances a businessman cannot be properly advised of the legality of his proposed conduct, under the antitrust laws, until such time as any particular question is litigated and decided.

Further, there are fashions in antitrust decisions, as in women's clothes, and these fashions change from season to season, depending upon the economic philosophy of the enforcing agencies and the court at the time of the hearing of any such controversy.

While we have been most careful to safeguard the life and liberty of a vagrant or a murderer, and to guarantee him procedural due process, we have failed to preserve to the economic litigant the same rights.

Turning now to a consideration of the second major aspect of the problem, the unsound substantive interpretations of the antitrust laws which have been the most effective means of destroying free enterprise, permit me to outline to you a few such unsound substantive interpretations. I am sure they will sustain the charges I have made.

Under the prevailing interpretation of the Sherman Act, the terms "trade" and "commerce" have been broadened to include insurance and farming, and the personal services rendered by real estate brokers and physicians. Even retail sales, within a state, of cigarettes and groceries are now deemed to be interstate commerce. As a matter of fact, the definition of interstate commerce has been so extended that hardly any distinction remains between interstate and purely local commerce. By destroying the distinction between these two utterly different aspects of commerce, the Federal Government, contrary to the provisions of the Constitution, has usurped an authority which is not its rightful domain; namely, over business which is purely local in character.

You gentlemen are perhaps familiar with the case of *Federal Trade Commission vs. Cement Institute*, involving the basing point system of delivery, in which the Supreme Court determined that equalizing freight rates violated the antitrust laws. This decision means that the Federal Trade Commission has practically succeeded in establishing that the only legal method of pricing is f.o.b. mill. If this f.o.b. mill principle is finally sustained by the Supreme Court, it will be completely disruptive of the commodity distribution.

In *U. S. vs. Trenton Potteries Company*, the Supreme Court decided that all agreements to fix or stabilize prices were, in themselves, wrong, regardless of the reasonableness of the prices fixed. As a result of this ruling, businessmen may not, by agreement among themselves, protect the consumer against exorbitant prices, nor may they, by concerted action, hold the line on reasonable prices, even though a particular industry may be threatened with destruction as a result of chaotic market conditions.

In *U. S. vs. Aluminum Company of America*, the Court of Appeals decided that for a business merely to be big was to violate the antitrust laws. As though this doctrine were not sufficiently startling, the court further declared that a large, efficient and successful business violates the law and is a threat to our economy, unless it participates in the development of competing enterprises. I submit that to compel a business to build up competitors is incompatible with free enterprise.

In the latest case against the three largest manufacturers of cigarettes, the Supreme Court decided that an enterprise is destructive of our economy if the evidence discloses that it has the power to exclude competitors from the

market, even though it does not exercise that power or engage in any competitive abuses. The effect of this decision is to punish a business simply because it is big, efficient and successful.

Similar decisions of a destructive character have been handed down in litigation involving the following companies: Standard Oil, General Electric, Westinghouse, Pullman, DuPont and many others, as well as many of our great industries, including oil, electrical, dairying, chemicals and meat packing, and, last but not least, the paper and pulp industry.

So much for the destructive results already accomplished. Now let me give you a few examples of what the Department of Justice and the Federal Trade Commission are attempting to persuade the courts to do in litigation still pending.

In its suit against the Atlantic & Pacific Company, the Department of Justice is asking the courts to dismember and dismantle this enterprise because of its size. In so doing, the Department reveals its lack of understanding of our economic system and the economics of efficient distribution. If it succeeds, it will benefit no one, and will injure the consuming public, the employees of the company, the shareholders, and, in fact, an important segment of our economy.

In the litigation against the manufacturers of spark plugs, the trial examiner in a Federal Trade Commission proceeding has eliminated functional discounts and the use of functional classifications in the price structure. If the Commission and the courts sustain this viewpoint, it may well result in the breakdown of jobber distribution.

In the proceedings pending before the Federal Trade Commission against Zellerbach Paper Company, the Federal Trade Commission is seeking to establish that a sale at prices other than those published in the seller's price list is a violation of the Robinson-Patman Act. The theory of the Commission is that a buyer may not bargain with the seller for a better price than that shown in the seller's price list, except at his legal peril. If the Federal Trade Commission is successful in establishing this proposition, the end of bargaining in business in America is at hand. The right to trade and bargain for a better price, as I see it, is a cornerstone of free enterprise.

Another destructive theory of the enforcement agencies is that the antitrust laws are violated when sellers set aside geographical differentials, if this results in a uniformity of prices, even though there is no evidence of an agreement, either express or implied, to fix prices. Under these conditions, business is guilty of "conscious parallelism," as the New or Fair Dealers call it, or, in language that you and I understand, a conspiracy to fix prices.

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In litigation involving the Standard Oil Company of California, the Department of Justice is seeking to destroy a wholly integrated enterprise by persuading the courts to deprive Standard Oil of the right to sell gasoline and other petroleum products at retail. If these theories prevail, the Standard Oil Company will be forced to choose between manufacturing and retail marketing, but cannot engage in both. Such a disruption of an integrated and successful enterprise would, as in the case of the Atlantic & Pacific Company, penalize the consumer, the worker, the shareholder, the supplier, in the present emergency, the armed forces, and all of us.

Another aspect of the problem relates to bargaining with labor unions on an industry-wide basis. A great deal of progress has been made in the solution of labor-management problems through such industry-wide bargaining. Now, however, the Department of Justice announces that it considers industry-wide bargaining with labor unions illegal. Its theory is that this practice constitutes illegal price fixing, and that an agreement on a component of cost; namely, labor, is an agreement on prices. Acceptance of this theory by the courts would be a body blow to labor-management relations, and therefore to the basic economy.

Another cause contributing to the destruction of the system is the existence of two conflicting economic theories incorporated in the antitrust laws —one requiring uniformity in price, trade practices and treatment of customers, and the other requiring differences in prices, trade practices and treatment of customers among competitors. On the one hand you are required to avoid prices, trade practices and trade customs "uniform with those of your competitors" on penalty of being found guilty of violating the Sherman Act. On the other hand, you must "follow" uniform prices, trade practices and trade customs with all customers, without exception, or be in violation of the Robinson-Patman Act.

So far we have been looking at the impact of this situation on our domestic economy. Now let us see how it affects our foreign trade.

In the last Congressional investigation on newsprint — and there have been five of these investigations, all told, since World War II — certain substantive interpretations of the antitrust laws were enunciated respecting the application of the antitrust laws to international trade. It was contended that if a foreign citizen manufactures a commodity—say newsprint, in a foreign country—say Canada—and sells it in the United States, any act of the manufacturer in Canada which would be illegal if done in the United States, but which is sanctioned by Canadian law and is legal there, constitutes a violation of our antitrust laws if the merchandise once enters the United States, even though the Canadian manufacturer did nothing in the United States.

It was further insisted that if newsprint manufactured in Canada was in short supply in the United States, and the Canadian manufacturer shipped a portion of his output to the United States, diverting some of it to another country, he was violating the antitrust laws because all of his output was not delivered in the United States. Should these interpretations of the antitrust laws be sustained by the courts and the Federal agencies, foreign commerce would be seriously affected.

As a final example, I should like to describe to you how the Department of Justice is seeking to dismember the United Shoe Machinery Corporation and to deprive this company of its manufacturing plants, machines and patents. The Government has asked the court, in its prayers for relief, that the corporation be deprived of the right to lease its machines, and that it compel the company, under such terms and conditions as the court deems proper, to offer and to sell its machines to its present lessees and the general public at reasonable prices. It further asks that if the company is permitted to lease its machinery, it may do so only on the terms and conditions fixed by the court, and that the company be compelled to license, under its patents, any person who desires to be so licensed, under conditions to be attached not only to such patents as the company presently owns, but to all other patents that the company may develop. It further requests that the terms and conditions of such licenses be fixed by the court, and that in such licenses be included the company's "know-how" and all its trade secrets. The court is further asked to require the company to sell its interest in eight or ten plants manufacturing commodities used in the shoe manufacturing business, and that thereafter the company be enjoined from engaging in the manufacture or distribution of shoe factory supplies.

If the Government prevails in this litigation, there won't be much left of the United Shoe Machinery Corporation. This litigation, like all other antitrust litigation, affects not only the particular business involved, but is precedent-making and affects all industry.

In part, through the mechanism of divestiture, divorcement and dissolution of business enterprise, the enforcement agencies of our Government and the courts are destroying industry and disrupting our economy.

I have selected just a few illustrations of the hacking up of our productive machine. Although there is almost no limit to the number of cases I could present to you, I am confident that these few are sufficient to dramatize the grave danger facing us. As an aid to the solution of this problem, we must develop an affirmative, not a critical negative approach.

Accordingly, I make this concrete proposal that, as a first step, a national commission be created, by joint resolution of Congress, to explore and study the economy of our country and the antitrust laws of the United States, and the decisions of the courts and Federal administrative agencies in connection with their effect on the economy of the country.

This national commission shall thereafter report its findings to the people, to the President and to Congress. The commission shall recommend legislation containing such economic principles, substantive and procedural changes, amendments and revisions of the antitrust laws and the decisions of the courts and administrative agencies as are necessary to achieve the objective.

Such national commission should represent every segment of our American society, including consumers, farmers, laborers and businessmen. It should be chosen on non-partisan lines, with full investigatory powers, including the right to subpoena witnesses and employ counsel and experts. It should be adequately financed by Congressional appropriation. It should be required to file interim reports and make its final recommendations and findings within five years.

If the American people decide that free enterprise should be perpetuated, as I believe they will, the recommendations of the national commission must, on the one hand, protect the American people from abuses of economic power which some segments of American industry have stupidly engaged in during the past sixty years. On the other hand, these recommendations and findings must protect the greatest industrial machine ever created, from judicial and bureaucratic interference and regimentation. This will permit free enterprise to survive, preserve civilization, and not only maintain our present high standard of living, but continually improve it.

The investigation of this problem and the recommendations for legislation are best made through a national commission, and not Congress. In answer to those who question this statement, I reply that these issues are so grave, so complex, and are subject to so much political pressure by the various pressure groups in America, that political considerations, rather than the ultimate welfare of America, would probably prevent a proper determination if left to Congress. The arena of politics is not the appropriate place in which to investigate the facts and report the findings. This work must be undertaken in an atmosphere beyond the realm of politics where selfish interests too often are the motivating force. It must be placed upon a plane where the sole motivation is what is best for all segments of American society. The report of the Hoover Commission for the reorganization of the executive branch of the Federal Government, as well as the work and reports of many other national commis-

sions, demonstrates the effective and constructive results attained by this procedure.

We who believe and have confidence in the competitive free enterprise system are faced squarely with a challenge from the forces that are bent on its destruction. The way to meet this challenge is to present the facts fairly and honestly to the people. Most of our critical problems have been and are being solved by the enactment of appropriate legislation which has resulted from the crystallization of public opinion.

Accordingly, it is my belief that a report by such a national commission on this most vital issue would crystallize public opinion and result in the enactment of legislation embodying the economic philosophy of the American people. If this can be done, I, for one, am willing and happy to let the people determine the economic destiny of our country. This, of course, is the democratic way of life, and I am convinced that the choice of the people will be infinitely wiser than that of the planners now destroying our economy. I know that to live under free enterprise will be the choice of the American people.

NAT. CONTAINER EXPANDS

JACKSONVILLE, Fla. — National Container Corp. will construct two additions to its plant here at a total cost of $62,500. One will be a one-story laboratory for the pulp and paper mill and the other a two-story structure to be used for chemical storage on the first floor and air conditioning equipment on the second.

EDMONTON INVITES TENDERS

Outline of tenders supplied to firms interested in bidding on a $14 million initial unit of the pulp and paper mill near Edmonton, Alberta, includes plans for the installation of a dissolving pulp plant.

R. O. Sweezey, Montreal, has invited tenders for the project which will be undertaken on the North Saskatchewan River six miles east of Edmonton by a company to be known as the Edmonton Pulp and Paper Mills Ltd. W. J. Zimmerman, Toronto, has been named as consulting engineer for the project on behalf of the mills. Specifications for the tender calls have been prepared by T. A. Burton & Co., consulting engineers, St. Catharines, Ont.

It is expected that ten years will be required to complete the five units. The initial $14 million unit would be for the manufacture of pulp and paper, the plant being designed so that four other units for additional processing can be added.

Processing and heating will be done by steam, with natural gas to be used as fuel. Required will be fuel oil standby storage tanks.

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Peppy Peeler

The Peppy Peeler is a portable peeler which has been used for several years peeling mine props and pulpwood in the Hearst, Ontario, section of Canada. The unit weighs approximately 1800 pounds without the engine, and can be supplied with a standard 24 horsepower V-4 air-cooled Wisconsin engine. It is suitable for mounting on skids.

Capacity ot this machine will vary from two cords upward per hour.

Various tests are being made in mills and at the Research Center to determine bark and fiber losses. From information obtained to date, the total loss apparently can be held below 20 percent for bark and solid wood, it is stated. Solid wood loss is less than 10 percent depending on the requirement of the mill as to cleanliness.

Gilmer Timing Belt

Large scale production has started of a rubber and fabric belt with teeth is considered an outstanding advance in power transmission. Known as the Gilmer Timing Belt, is designed to the need for a power drive which will not slip and permit split-second precision timing. Also can be used as a functional part such as a synchronized conveyor, as well as for transmitting power, the manufacturer states.

In addition to its anti-slip characteristic, the new belt will not stretch and will operate on fixed centers without take-up adjustments. Since it needs no initial tension it has unusually high efficiency with extremely low bearing pressure. Tests have shown that the belt operates mor quitely than precision gears running in an oil bath, it is stated.

Pressure Washing System

The new stock-washing system uses pressure instead of vacuum to remove liquor from the pulp. Among the advantages reported are: high capacity; low power consumption; complete absence of foam; clean washing, with low wash-water requirements; space-saving, through compactness of units and flexibility of installation.

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The Pulp Situation

L. Turcotte[1]

[1]President, Puget Sound Pulp & Timber Co., Bellingham, Wash.

On being asked by Ted Tinker to talk to you today on the "Pulp Situation," I hesitated a long time before accepting his invitation and perhaps I should have hesitated a lot more, being a member of the pulp producing group and talking to a group of consumers of pulp. I also know that this is the tail end of the convention and that you are so crammed with information and statistics that very probably you know as much, or maybe more than I do, about the subject.

So I really have the tough assignment of keeping away from as many statistics as possible and still try to say something that you have not already heard repeatedly this week.

First I would like to review the wood pulp record of 1950.

Domestic production approaching 15 million tons, augmented by imports considerably over 2 million tons, gave wood pulp consumers in the United States more than 17 million tons of new supply in 1950 and yet, at the end of the year in which new production and import records were set, there was a shortage of pulp. With other pulp-hungry countries bidding up prices, a substantial change in import supply sources developed, creating a situation of direct concern to consumers who depend upon market pulp to meet your requirements.

This nation's mills turned out 14,776,000 tons of wood pulp in 1950, against 12,185,000 tons in 1949, and topped the previous production record of 12,872,000 tons made in 1948. Imports supplied the industry with 2,377,000 tons, in comparison with 1,763,000 tons in 1949, and 2,176,000 tons in 1948. Exports took just 93,000 tons in 1950, leaving 17,060,000 tons of new supply for domestic use, compared with 13,852,000 tons in 1949, and 14,946,000 tons in 1948.

Throughout 1950 the trend of domestic production was upward, with the best gain being shown in the final quarter. Total output rose from an estimated 3,475,000 tons in the first quarter to 3,635,000 tons in the second quarter, 3,710,000 tons in the third quarter, and 3,956,000 tons in the fourth quarter.

Fluctuations in imported pulp tonnages were relatively unimportant in total amount, but important changes did occur in the amount reaching our shores from different countries. Shipments from Canada and Newfoundland continued the rising trend which has prevailed for sometime past, but shipments from Scandinavian countries declined appreciably as the year progressed.

Arrivals from Sweden, Finland and Norway during the fourth quarter were just about half those of the first quarter of 1950, dropping from 244,000 tons to 122,000 tons between these two periods. This was exactly the reverse of the trend in 1949, when imports from Scandinavia rose from 55,000 tons in the first quarter to 245,000 tons in the fourth quarter.

As on previous occasions when pulp has been in short supply, converting mills which depend upon the market for their principal or entire pulp supply feel the pinch most of all. Their interest is not in the total supply, but in the relatively small portion which is available as market pulp. To them it is a significant fact that more than half of all market pulp is imported, and nearly one-third of our imports have originated in Scandinavian countries from which last year's shipments were in sharply declining amounts—as demand increased in other world markets and at more attractive prices than in the United States market.

Presented at the Open Industry Meeting of the American Paper and Pulp Assn.'s Annual Convention, The Waldorf-Astoria, New York, N. Y., February 22, 1951.

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These 5 essentials are permanently built into R-C Cycloidal Vacuum Pumps for paper mill operation:

1. **LOW POWER CONSUMPTION**—because units are recommended, either single or compound, to operate at the most efficient point.
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If we review these figures which I have given you on production and imports for the three years of 1948-1949-1950, it is plain to see that the production loss of 1949 has been a severe blow to the pulp consumer in the United States and one from which the supply and demand situation has not yet recovered. Well over a million tons of pulp production was lost in 1949, counting loss of domestic production of over 700,000 tons and the balance in foreign production.

This downward trend in business, starting late in 1948 and continuing into 1949, caused heavy cancellation of pulp orders. This in itself was serious, but to add to the seriousness of the situation many consumers not only quit buying but also liquidated their inventories. The market pulp producers as soon as they had filled all their warehouses with inventory only had the alternative of shutting down their plants, or curtailing production, while others operated on shorter work weeks.

If I may work backwards, the pulp producer had of necessity to curtail his wood purchases and this, particularly in the Pacific Northwest, can be a serious matter as the logger moves his equipment to other non-pulp timber stands, the building of roads into timber ceases, and it usually takes a year to get over an interruption of this nature and get going again in the pulp timber.

It would be foolish of me to stand here and say that the pulp consumers could have taken into inventory all of this million tons or more available, but I would venture to throw out the suggestion that, spread over all of the converting mills in the United States, a substantial portion of it could have been taken into inventory without unduly jeopardizing their financial resources and with this inventory well scattered throughout the hundreds of converting mills it certainly would have alleviated to a great extent the present situation of fibre shortage prevailing all over the world. Besides, this extra supply could have been purchased at very attractive prices and would have had a steadying effect on world pulp prices.

But now I can say pretty much the same thing about some pulp producers. I do know that in 1949 curtailment of pulp production discouraged the pulp producer in his raw material procurement and we, like the pulp consumers, missed some excellent bargains in wood procurement. I think this is pretty good Monday morning quarterbacking. So I guess we all missed the boat one way or another. So much for the past. What about the future?

Speaking of the North American Continent, I do not believe the supply and demand situation is very far out of balance, but from a world standpoint it is and I look for a very tight situation for quite a few years to come and it is natural that as more dollars are earned by foreign countries the demand for North American fibres will grow more insistent. With the recovery of Western Europe, Great Britain, and the Asiatic countries, this demand is here now and becoming more and more insistent, while on the other hand there does not seem to be very much hope of increasing fibre production anywhere else excepting on this continent.

Besides this strong foreign demand, additional fibre-consuming machines are continually being installed in the United States, Canada, and other countries. Per capita consumption of fibre products is rising all over the world. Populations are increasing at rapid rates, so all I can see is that we are going to need a substantial amount of additional pulp capacity. Even without any changes in standards of living, population increase alone will require it and we must not overlook the fact that a substantial tonnage of pulp will be lost over a period of years by lack of wood supply adjacent to some of the present producers.

In the chemical pulp supply field, let us remember that of eight world areas covering production and consumption of chemical pulp — consisting of North America, Latin America, Northern Europe, Eastern Europe, Western Europe, Central Europe, South Africa, Asia and Pacific, only one area (and that is Northern Europe) shows a production in excess of consumption; in other words, the other seven world areas must import chemical pulp to supplement their production.

New mills will have to be built further away from the market centers as an efficient pulp operation must be of substantial daily tonnage and be backed by very substantial timber holdings, especially when one considers the cost of building a pulp plant today, and these substantial timber holdings are getting further and further away.

With the proper timber supply there is no reason why additional capacity will not be provided. We do know the initial investment is high, that interest on the investment will be substantial. We also know that taxes are too high and not likely to go lower, so, doing a little arithmetic on some figures picked out of the air, it would look something like this:

Say you had a 350 tons pulp plant built pre-war, all paid for, and on which your depreciation was $4 per ton, and you made a profit before taxes of $6,000,000 and the tax rate, to make easy figuring, was 50 percent, you would have a net profit of $3,000,000, and you would retain $4 per ton depreciation on 125,000 tons, or $500,000 or a total income of $3,500,000.

Now let us start on one today, and the 350-ton per day pulp mill cost $40 million, on which your depreciation was $20 per ton and interest $5 per ton spread over an amortization period. Although you would have a disadvantage of $21 per ton in cost of production, consisting of $16 deprecia-

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Paper Making Machinery
Bag machinery for single and multi-wall bags of pasted and sewed valve type. Rotary Spot Cutters, hand or automatically controlled Shower Pipes.

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THE SMITH & WINCHESTER *Manufacturing Company*
SOUTH WINDHAM, CONN.

tion and $5 interest, figuring your wood and conversion costs were the same but with a 50 percent tax, this would be reduced as follows:

Profit before taxes for pre-war mill..	$6,000,000
Less $21 per ton on 125,000 tons....	2,625,000
Profit before taxes	3,375,000
Taxes at 50%	1,687,500
Add depreciation	1,687,500
$16 per ton on 125,000 tons.....	2,000,000
Profit & depreciation retained.....	3,687,500

So with a continued firm demand, I believe that additional pulp plants will be built, but it is easy to determine that consumers will have to get used to a higher plateau of pulp prices than we can still remember in the '30's otherwise such new plants could not operate with their much higher fixed costs. And I mentioned earlier such development of further pulp production is dependent upon a substantial wood backlog. There are still quite a few areas which meet this requirement, some more favorable than others, but eventually all will be used, and when we add all of the areas together, we can say with confidence that the raw material will be available on the North American Continent.

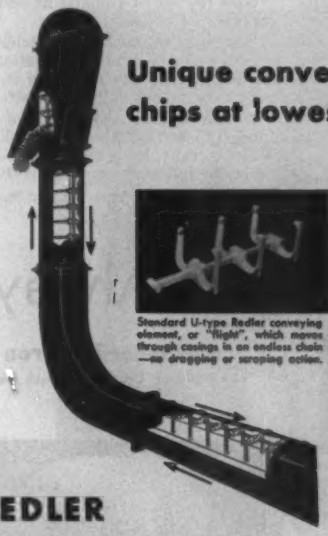
In other parts of the world the wood supply situation is not at all satisfactory, and if I may take the time I would like to quote from the "Pulp, Paper and Board" Industry Report of the U. S. Department of Commerce of November, 1950:

"Although the United States pulp and paper industry does not envisage serious over-all difficulties during the near future in acquiring adequate supplies of wood to support their production at required levels, pulpwood shortages are becoming a hazard in other parts of the world. In fact, they currently represent a major deterrent to a vitally sought-for increase of paper and board production in France and the United Kingdom as well as being a serious supply problem to the pulp industries of Sweden and Norway (which formerly exported moderate quantities of wood for pulping). The first two countries are suffering from the complete withdrawal of the U.S.S.R. and Poland — from the pulpwood export market. The U.S.S.R. alone in the prewar period exported over a million cords of pulpwood, much of it going to Western Europe; and the countries of that area, particularly England and France, are now endeavoring to secure replacements of the deficit, principally from Canada. In respect to France whose recent supplementary supply of wood from the Black Forest has reportedly been exhausted, the E.C.A. has made a grant of $3.4 million for the purchase of pulpwood in Canada.

Austria, which exported over 200,000 cords in a preway year, is now handicapped by high production costs and lack of mechanical equipment. Germany, too, a prewar exporter of as much as 300,000 cords (in 1937) is no longer a vital factor in the European supply pool in consequence of its dismemberment and the overcutting of its important areas. Notwithstanding this trend, Western Germany is finding sufficient wood to accomplish a fairly steady improvement in pulp production.

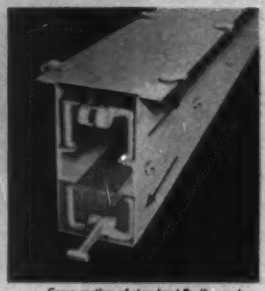
In the Far East, Japanese pulp mill stocks of pulpwood at the close of July were over 100 percent above the same date in 1949. While this upswing in wood stocks would seem to indicate a favorable situation in respect to wood pulp production, the latter is reported by trade observers to be substantially below present needs. It is estimated that Japan will supplement its fiber requirements by the purchase of $1.5 million of bagasse from Taiwan during the fiscal year ending June 30, 1951.

There is little likelihood that the overseas scarcities of pulpwood, as previously outlined, will affect the domestic supply except for the indirect influence of increased demands on Canada's pulpwood surplus. Canada has a reported plentitude of pulpwood timber and can, no doubt, spare appreciable quantities to supplement the growing European requirements. The 8 to 10 percent of the United States' entire pulpwood receipts that originate in Canada will quite possibly continue to be available to our mills subject to



Unique conveyor moves wood chips at lowest cost per ton

Standard U-type Redler conveying element, or "flight", which moves through casings in an endless chain —no dragging or scraping action.



Cross-section of standard Redler casing. This shows material moving in lower run and flights returning in circuit fashion in the upper run.

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Conveyor Elevators . . .

S-A REDLER vertical closed-circuit conveyor elevator encircles storage silo . . . stores and reclaims wood chips for delivery to digester located in adjacent building.

REDLERS convey and elevate wood chips *in the mass*—horizontally, vertically, on incline or around bend corners. Skeleton-type links buried in the flow of wood chips keep them moving as a solid column. Continuous Conveying action takes place within a totally-enclosed, dust-tight casing.

Compact REDLERS are smaller in cross section than other types of conveyors of the same capacity. They handle large tonnage in limited space. Standarized construction, economy of installation and other features contribute to low first cost . . . and maintenance, too, is less.

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the Canadian policy of a more intensive conservation of its unprocessed forest products. The latter program is likely to reduce total Canadian pulpwood exports to all points over the long pull.

So you can readily see that the answer to the pulp supply situation is the wood supply, and if I may quote another short statistic this will show the steady increase in forest growth since the turn of the century. This shows the new annual growth and removal for four periods covered by Federal appraisals:

	New Annual Growth All Timber
1918 cu ft.	5,995,000,000
1929 cu. ft.	8,912,000,000
1936 cu. ft.	11,287,000,000
1944 cu. ft.	13,370,000,000

Removal—All Timber			
1918 cu. ft.	26,049,000,000	4.34)	times
1929 cu. ft.	16,351,000,000	1.83)	new
1936 cu. ft.	13,463,000,000	1.19)	growth
1944 cu. ft.	13,661,000,000	1.02)	timber

The gap is steadily narrowing and timber growth and consumption are moving into balance which is most important to the pulp producer as well as the pulp consumer, so with this improved situation added to virgin forests still available on the North American Continent, I repeat that additional pulp producing facilities will enable our country to continue with its high standard of living as far as products made from fibre are concerned, whether there will be sufficient on a world-wide basis is problematical.

Continually new wood supply is available to the pulp manufacturing industry as witness the trend in the past 25 years.

The use of billions of feet of hemlock and balsam in the production of pulp.

The use of the pines.

The use of hardwoods.

Now the use of Douglas fir and percentages of cedar.

The use in these new fields has greatly enhanced the raw material supply to the pulp producer, and is most important to the pulp consumer.

I probably have done a lot of rambling around in this short talk, but what I really have tried to do is to leave the following thoughts with you:

FIRSTLY: That the next time business slacks off a little take a good look at the world supply situation, and this applies to wood as well as pulp supply. Add to your inventory instead of depleting it. All, of course, within one's financial ability to do so. This will minimize loss of productive capacity, and will make for steadier prices.

SECONDLY: New pulp facilities will be constructed to provide for our increasing population to provide for new development in fibre uses, to maintain our high standard of living, but they will, of necessity, have to be built in more remote areas where there is ample timber. This will also give our more accessible timber lands a chance to grow more timber per acre, by delaying the cutting of too young trees.

THIRDLY: Production costs in newer plants will be high so we must be ready to accept a much higher plateau of prices, and this is more or less true of all raw materials.

AND LASTLY: The wood supply for pulp manufacturing is in good shape for our domestic use, but world demand for pulp without a world supply of raw materials will make for a very close situation in supply and demand for a long time to come.

Somebody Is Always Listening*

Alexander R. Heron
Vice-President, Crown Zellerbach Corp.

The most effective record of speech which has come down to us is probably the biblical story of a "still small voice." The defenders of our American system used the thunders of oratory and the glare of billboards for many years, to proclaim that ours is the best system in the world. They put faith in the value of repetition to convince the American workers and consumers of such truths as "what helps business helps you." In recent years, they have gone beyond these simple assertions that our way of life was the best in the world, and made an effort to explain the workings of our economic system. The simplified vitamin capsule type of economic education may not correspond closely to the thunder and the earthquake and the great wind. But certainly the negative side of the program, the warnings against regimentation and dictatorship and collectivism and socialism, have been poured out in thundering tones.

Many people who were unwilling to answer yes to the question "Is business talking too much" have suspected that business was at least talking too loudly. But perhaps neither the quantity nor the loudness of our talking has been the main trouble. The question about our Hooper rating may be more important. The question "Is anybody listening" may have earned a 90% no answer as far as any particular pronouncement, broadside, pamphlet or circular letter is concerned. Even the zero Hooper rating would allow for the certainty of a few receivers being tuned in. Every such talking job by our friends had some listeners. Someone is always listening to every message.

In a different sense, everyone is always listening. Some of them are listening for the message in the thunder and the earthquake and the great wind. Some of them eagerly tune in on the radio program which tells the success story of Joe Doakes, made possible by the free enterprise system or the American way. Some of them read the editorials or the colored ads in the national magazines, listening with their eyes. Some of them even read the payroll stuffer pamphlets which they must take in order to get the pay check. Some of them listen in these ways, but a great many more of them are listening subconsciously, listening and receiving the message of the "still small voice."

What is this still small voice? It is the daily behavior of those who are classed as the business men of America. It is the behavior of the president of the corporation, the personnel office, and the foremen on the job. It is the attitude of the gate watchman, and the tone of the telephone operator. It is the response of manage-

* Presented at American Paper and Pulp Assn. Open Meeting, New York, February 22, 1951.

ment people to the expression of an employee grievance, and the pricing policy of the super market.

Some of us have been given the responsibility of helping to plan for a better understanding of the American pulp and paper industry; better understanding by the people who work in the industry, the people who manage the industry, the people who use its products, and the people who administer government regulations on some of its activities. Part of what I hope to do this afternoon is to bring to you what seems to be the nearly common feeling of those of us interested in this problem.

Without any "if" or "maybe," the feeling was that a national or industry-wide or inter-company program of economic education, or of business information, is unnecessary, is undesirable, and is almost sure to be ineffective. The second feeling, almost as general and almost as strong, is that those of us who have responsibilities of management in the industry need a better understanding of this industry, and of American industry in general, than we now have. A third assumption is that every management in this industry has the responsibility for daily conduct which can be squared with the beliefs of our own consciences, beliefs of employees and customers and neighbors, as to what is right. A fourth conviction is growing, but I cannot say that we all agree on it. To be safe, I shall not ask anyone to share the responsibility for it, but offer it to you as my own conviction.

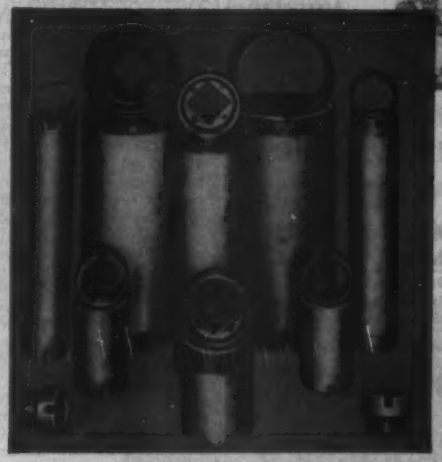
We need one simple foundation for the understanding of our American business system. It must be so simple that all of us in management can agree upon it. It must be so simple that everyone who works in American industry can accept it. It must be proved, and it must furnish the explanation which will make it possible for us to work together as a team.

Accepting the premise that everyone is forming or firming his opinions on our business system every day; in other words, assuming that somebody is always listening, it must be an explanation which fits the happenings of every day.

Is there such an explanation? Can we understand enough about our American business system, without being educated in the principles of economics? Can we know why and how we work together without understanding the theory of the creation of capital, the function of profits, the price wage relationship, the function of money and credit and taxes? All these things are important to anyone who wants a complete understanding of our economic system. But I am suggesting to you that we must find a simple basic understanding of how and why we work together, and this is my own idea of the foundation on which we can build this understanding.

In the United States, the people still trust private management to manage the economy in peacetime, within certain limitations. Almost all the rest of the world has taken that job out of the hands of private management. The same thing can happen in the United States; not by a revolution all at once, but little by little. The steps toward driving private management out of the picture are sometimes necessary, sometimes arbitrary. They include government control of banking and credit, government destroying private management by competition in many fields, which already range from carrying mails to low rent housing. Sometimes the steps are justified because monopoly is necessary, and they do not trust a private monopoly. Always the step must get support by proving or claiming that private management has failed to do the job, or that government management can do it better.

What is the job where private management may be charged with failure? What is the result which the people as a whole demand from business, or from our economy? The answer is two-fold but very simple. The first job of our economic system is to provide an adequate supply of goods and services to meet the needs of our people. When private management cannot provide an adequate supply of hydro electric power or low cost housing, the salesmen for government management



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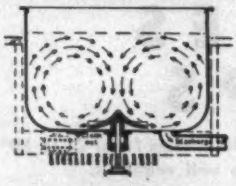

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have an easy political job. Wherever and whenever private management fails to meet the productive needs of our economy, fails to provide this adequate supply of goods and services, it will lose some part of its job of managing the economy.

This basic rule of our business system must be understood by management. It sums up all the dangers that we face. Collectivism, socialism, communism or fascism are steps or methods of ousting private management and substituting government management of our economy. They can only come into existence in America if private management can successfully be accused of failure. It is not enough for us to prove that our private management system so far has furnished a more adequate supply of goods and services than any other economic system in the world. The system can still be found guilty, by a jury of the voters, if it fails to provide adequate housing, or adequate supplies of fuel and light, or safe and convenient transportation.

But there is a second responsibility of private management, which private management must understand and accept. It is the responsibility which can make wage earners and stockholders equally interested in the operation and success of our American system. It is the responsibility to provide an adequate supply of jobs. Before you accuse me of going socialist, let me offer two pieces of evidence. The first is the fact that we have already had one experience when private management could not supply jobs. In the early 30's, government management stepped into the picture and supplied so-called jobs. The WPA and CCC continued to provide jobs for hundreds of thousands of workers as late as 1943, when private management needed those hundreds of thousands of workers in its war production effort. There was no intention on the part of the bureaucrats to get the government out of the business of furnishing jobs.

The other piece of evidence which I want to present consists of a short story. George Washington spent his first 18 months as president of the United States in New York City. His household account books show that during that time he used his personal funds to buy a great many things for the presidential house, as well as purely personal items. These included about 40 items which would be bought from stores today. There was a kitchen range, a bedroom heater, a set of flat irons, a rocking chair, a bedstead, a pair of andirons, a luxury coach. The personal items for himself and his family included boots, shoes, slippers, corsets, combs and handkerchiefs.

There is no point to this history, except that every one of these items was ordered from a craftsman, instead of being purchased in a store. Each of them was made-to-order. In each case, the customer talked with the craftsman. The craftsman sold his skill and time directly to the customer who furnished his pay. Perhaps the extreme contrast will be emphasized for us by noticing that one item was an order for 400 pounds of foolscap paper purchased directly from the skilled papermaker, and made to order, by hand, just a little ahead of the Fourdrinier revolution.

There is some significance in the fact that George Washington had to go to the trouble of placing these orders personally, discussing the selection of leather and style for his boots, and many details of material and workmanship for the other items. It is of some importance that the average worker in America today can and does obtain more new shoes, of better quality, than did Washington. Much more important is the fact that the average worker in those days was directly in touch with the man who paid for his services. Nearly 90 per cent of the adult white males in the country were self-employed. It is true that the journeyman worker received wages from the master worker, but the customer who provided those wages for both of them was almost always right there, in the same city or village.

Today, more than 80 per cent of the working population in the United States is not self-employed, but is on somebody's payroll. More than one half of the remaining self-employed people are self-employed farmers. The rest of them are doctors, lawyers, public accountants and operators of very small business establishments.

Among the small minority of gainfully employed people who are self-employed today, there are about 700 custom shoe makers, operating pretty much as did the cobbler who made the boots and slippers for George Washington. Their tools and materials are different, but these custom shoe builders sell their products directly to the customer. There are a very few people who have their shoes made to order, as a matter of pride or comfort. Almost all the customers for these made-to-order shoes are skiers and skaters, and people with deformities which require orthopedic shoes.

There are about 700 of these shoemakers. There are 250,000 workers employed in shoe factories. They make the shoes for all the rest of us. They may be working in Lynn, Mass., and receiving their pay checks from a company which has its headquarters in that city. But the shoes are sold to you and me, in New York, Cleveland, Savannah, Seattle or San Francisco. And from the customers in those cities must come the dollars to meet the payroll in the shoe factory at Lynn, Mass. The shoemaker in Washington's day sold his services directly to the customer in the same town, and received his pay from that customer. The shoemaker in the modern shoe factory never sees the customer, never knows his name, and does not sell his skill and services directly to the customer. He must depend upon an almost endless

chain to connect him with the customer and the customer's dollar, as far as 3,000 miles away.

Another contrast may help us to see the picture of our present industrial system. You will recall that Washington arranged with a local papermaker in New York to make for him 400 pounds of foolscap sheets. To draw the contrast, let me remind you of the long chain of today which is involved in the sale of 400 pounds or 400,000 tons of newsprint paper. The chain begins with two skilled men known as fallers, standing at the foot of the tall hemlock tree in the Pacific Northwest. Their job is to fall that tree, remove the limbs and branches, and cut the trunk into logs suitable for pulpwood. They receive wages for that work and of course the wages are pretty high. Where do they come from?

No one is willing to buy logs from these two men, for the purpose of owning logs. The logs are moved to a waterway, rafted, towed to a pulpmill. They are barked and prepared for the making of pulp. Some of them are put through the grinders to produce groundwood. Others go to the chipper and sulphite mill. The resulting pulp finally arrives in the head box and is released to the Fourdrinier wire, to form a sheet which is dried, reeled and rewound. The product is a 2,000 pound roll of newsprint paper. With all these intervening steps, in which hundreds of men are involved, the sale has not been completed. The newsprint rolls are shipped to the newspaper publisher who pays the mill a modest price. The publisher gets no satisfaction from being the world's largest owner of 2,000 pound rolls of newsprint. He wants that paper to move out through the printing press and out to the street. He sells part of it as service to the advertisers, who pay him for the space, but they are not interested in owning sapce on page 5 of the daily paper. They cannot afford to buy that space out of their own money. They are interested in bringing customers to their stores or businesses, and part of the customer's dollar is used to pay for the advertising space.

The publisher also sells that newsprint paper to you and me, at the news stand, or delivered at our homes. In San Francisco, we pay 7c for about 4 ounces of newsprint paper every day. Actually, we are not interested in acquiring eight pounds of newsprint paper each month. What we want is news, advertising and the comics, market quotations, baseball scores and some advertisements to read.

If the two men at the foot of the hemlock tree had to sell their product to the final customer, as most workers did in Washington's day, they would soon give up the struggle and turn to raising potatoes, or building houses for their neighbors. They could not enjoy a standard of living based on their present average incomes of more than $5,000 a year. Their incomes, their standard of living, their employment itself, all depend upon the long chain which reaches from them to the customer who buys the newspaper at the corner news stand.

These two stories paint the picture which for me describes our business system in its simplest terms. The worker of today is removed from his final customer, sometimes removed by thousands of miles and hundreds of transactions. We cannot have anything approaching our present standard of living through an economy where each man sells his own services directly to the final customer. In such an economy, we might have 100,000 automobiles instead of 40,000,000; one hundred thousand refrigerators, instead of twenty million; 100,000 radios instead of thirty million; 2 million suits of clothes a year, instead of one hundred million.

The simple fact is that our complex organization of American industry is the necessary chain to connect the customer with the worker. The job of management is to operate this machine, first so that the customer can obtain the goods and services he wants, and second so that the worker can get his payroll dollar from the ultimate customer. Since he cannot sell his services or products directly, he must depend upon this long chain of man-

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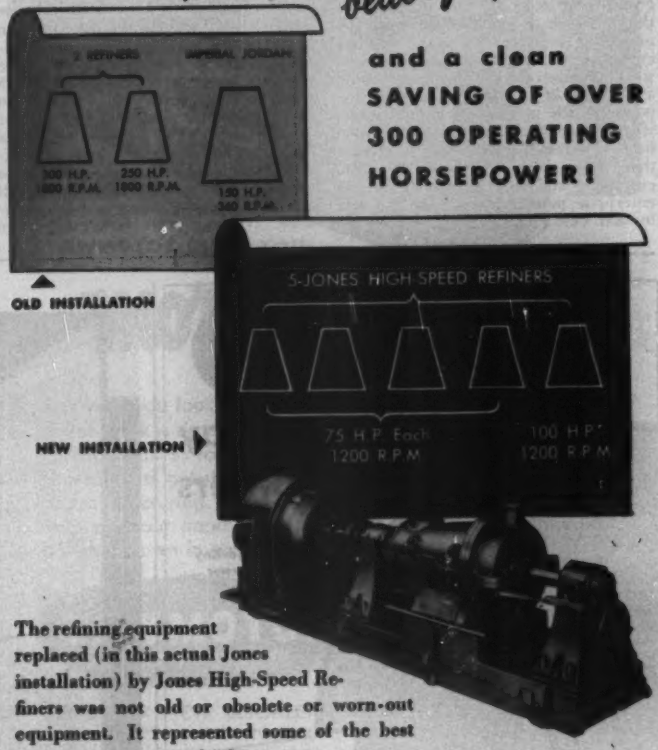

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Jones

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aged operations to make the contact for him. Every step in the process of production and distribution is actually the selling step. The process of converting the hemlock logs to pulp is one step in selling the services of the two loggers to the man who finally buys the daily paper.

If management and workers and customers can ever see this picture, can ever recognize our whole economy as a selling function, it will lay a foundation for an entirely new type of understanding. It will not solve all of our problems. We shall go on arguing about the division of the sales dollar; how much for wages, how much for the investor, how much for the manager. We shall go on arguing about technological improvements, the relation between wages and prices and profits, the hundred other related problems. But if all parties to every argument can start on the premise that the main job of all of them is the job of selling their services to the ultimate customer, many of the problems iwll solve themselves. For instance, would any employer be afraid to explain the policy of the guaranteed annual wage, if the union representative to whom he was talking could understand that the only wage there is comes from the customer, and that everybody in the enterprise must help to make the sale to that customer, or there will be no wages, whether annually guaranteed or any other kind.

This selling job requires the cooperation of the janitor, the purchasing agent, the telephone operator, the paper machine maintenance mechanic, the roll wrapper, the shipping clerk, and thousands of other people. Whenever any one of them falls down on his job, the ability of the whole group to sell its final product is reduced.

Somebody is always listening to the story of the American business system. With just a little faulty tuning of the receiver, millions of these listeners hear the story as one of conflict between capital and labor, profiteering, price squeezing, monopoly, featherbedding. They hear the constant refrain of union security, social insurance, seniority, technological unemployment, productivity per worker and unsatisfactory wage rates.

With just a little better tuning, these millions who are always listening can hear the story of the American business system as the greatest and most necesary cooperative selling job which the world has ever seen. If they can hear the simple fact that every hour of a worker's time must be sold to a customer, and that every hour a worker's time is actually devoted to that selling job, the other questions will fall into orderly sequence of importance. No wage rate is a good wage rate if it makes it more difficult to sell the worker's time to the ultimate customer. Any profit is too high if it threatens to cut down the total sale. Any management policy is uneconomic if it fails to attain the cooperation of every member of the production and selling team.

POWELL RIVER EXPANSION

Gardiner & Thornton, 1664 West Broadway, Vancouver, B. C., have been appointed as consulting architects for the Powell River Co., Ltd. An expansion and development program to cost between $10 million and $12 million was recently announced by the company.

ADDITIONS AT MACMILLAN

Announcement of a $900,000 program for further expansion of the new pulp and paper mill of the H. R. MacMillan Co. at Harmac, near Nanaimo, B. C., was made recently by H. M. Hoffmeister, president of the company.

Two digesters will be added to increase the flexibility of plant operation and to shorten down-time for overhauls. Pulpwood chip storage capacity will be increased by the erection of four large new bins, each holding 275 units of 200 cubic feet.

A dock to accommodate ocean-going vessels will be erected this fall. The new wharw will be 400 by 60 feet.

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Wet exposed surface
..With Red Ray Burners
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It all adds up to improved performance at reduced operating cost. Complete information is yours on request.

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VALVES: GATE, SWING CHECK, BLOW, GLOBE, ANGLE AND "Y"

WRITING PAPER MFRS. ASSN.

(Continued from page 96)

Members elected to the Association Executive Committee representing the Sulphite Bond Group were: A. C. Remley, Nekoosa-Edwards Paper Co., re-elected Chairman of the Sulphite Bond Group; W. J. Garrity, Munising Paper Co.; J. H. Goodwin, International Paper Co.; H. H. Hanson, W. C. Hamilton & Sons; W. L. Jennings, West Virginia Pulp and Paper Co.; H. W. Kampf, Mead Corp.; C. B. Morgan, Eastern Corp.; H. W. Suter, Jr., Champion Paper & Fibre Co.; J. D. Zink, Hammermill Paper Co.

In addition, the following were re-elected to the Association Executive Committee: Norman Harrower, Linton Brothers & Co., representative of the Bristol Board Group; G. E. O'Connor, Mohawk Paper Mills, Inc., representative of the Cover and Text Paper Group; Bernard Lucas, S. D. Warren Co., representative of the Thin Paper Group.

Speakers at the meeting included General Frank Howley, former Commander of the U. S. Zone in Berlin; W. B. Zimmerman, President of the association; R. E. O'Connor, American Paper and Pulp Assn.; W. W. Corlett, Counsel and M. C. Dobrow, Executive Secretary of the association.

The meeting was attended by over 125 members and guests.

COVER AND TEXT PAPER GROUP

George E. O'Connor, Mohawk Paper Mills, Inc., was re-elected Chairman of the Cover and Text Paper Group of the Writing Paper Manufacturers Assn. at its meeting at the Waldorf-Astoria on February 21.

Other members of the Cover and Text Paper Committee elected were as follows: C. W. Hanson, Hampden Glazed Paper and Card Co. as Vice-Chairman of the Committee; R. F. Arnold, Strathmore Paper Co.; G. H. Beckett, Beckett Paper Co.; L. B. Kelley, A. M. Collins Manufacturing Co.; W. W. Langtry, District of Columbia Paper Mills, Inc.

J. L. Ritchie, Executive Director, U. S. Pulp Producers Assn., discussed the wood pulp supply situation. A summary of his remarks follows:

Wood Pulp Supply

The supply of wood pulp available for domestic consumption in 1950 was the highest on record.

This country's aggregate new supply of wood pulp last year totaled over 17 million tons, exceeding the 1949 new supply by 24 percent and the 1948 supply by 14 percent.

The new supply of market pulp also established an all time record in 1950. Market pulp supply last year totaled 3,424,000 tons, exceeding the 1949 new supply by 37 percent and the 1948 supply by 9 percent.

Expansion of domestic pulp capacity during the postwar period 1946-50 averaged over a millions tons a year.

As a result of increased capacity and high operating rates, total domestic

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pulp production in 1950 broke all records. Production for the year totaled 14,827,000 tons exceeding 1949 production by 22 percent and 1948 production by 15 percent.

Domestic sales of market pulp were at a peace time high in 1950. Last year's domestic sales of market pulp totaled 1,543,000 tons, exceeding 1949 sales by 26 percent and 1948 sales by 9 percent. Domestic sales in 1950 constituted 45 percent of our total market pulp supply.

The supply of domestic pulp that will be potentially available for domestic consumption in 1951 will depend upon a number of factors, some economic, some political. The level of domestic capacity will continue to rise in 1951. Whether or not over-all demand will require full utilization of an expanded pulp capacity throughout 1951 is a moot question. If it does not, then the level of demand will be a primary factor in the determination of the level of pulp supply. If it does, then the impact of other factors upon the domestic industry's 1951 operating rate will have a major bearing on the supply of pulp prospectively available for normal United States consumption this years—for example, the impact of possible shortages of materials, such as sulphur or wood, and of services, such as transportation and manpower; or the impact of increased demands for nitration or for export under the government's mobilization program.

The supply of wood pulp from Canada and the United States, potentially, could be greater in 1951 than in 1950; many bottlenecks could arise in both countries, however, to prevent full operation of existing facilities and full achievement of maximum potentialities.

Some decline in the volume of overseas' imports seems indicated for 1951; the measure of the decline may be determined in part by the character of our domestic controls.

If the full potentialities of North American supply can be realized and if the prospective decline in imports from overseas can be minimized, then there is a good prospect that this country's total supply of pulp in 1951 may exceed that of 1950.

BRISTOL BOARD GROUP

Norman Harrower, Linton Brothers & Co., Fitchburg, Mass., was re-elected Chairman of the Bristol Board Group of the Writing Paper Manufacturers Assn. at its meeting at the Waldorf-Astoria, New York City, February 19, 1951.

Other members of the Bristol Committee re-elected were: A. P. Mitchell, Vice-Chairman, Riegel Paper Corp.; J. B. Cowie, Hollingsworth & Whitney Co.; R. H. Morrill, Chemical Paper Manufacturing Co.; George Watson, Wheelwright Papers, Inc.

E. W. Tinker, Executive Secretary of the American Paper and Pulp Assn. spoke on the problems confronting the industry in this period of mobilization.

In his annual report, M. C. Dobrow, Executive Secretary of the Writing Paper Manufacturers Assn., stated that the 1950 gain in shipments of Bristols, compared with 1949, was 34 percent in tons.

In the fourth quarter of 1950 there was a substantial gain in unfilled orders for bristols and a sharp decline in the stocks on hand at mills. Preliminary figures indicate that January, 1951 shipments of bristols were about 11 percent over the tonnage shipped in the corresponding month of 1950.

Prospects for 1951

The current business boom, engendered by the rapidly growing defense program, makes it reasonably certain that the production of physical goods will be higher in 1951 than it was in 1950, and perhaps by as much as 15 to 20 percent. Perhaps the upper range of this increase cannot be achieved because of the limitations of productive capacity, of raw materials and manpower. But even an increase in physical goods production of 10 to 15 percent will call for a considerable increase in consumption of paper and paperboard.

THIN PAPER GROUP

Bernard Lucas, S. D. Warren Co., Gardiner, Maine, was re-elected Chairman of the Thin Paper Group of the Writing Paper Manufacturers Assn., at its meeting at the Waldorf-Astoria, New York City, February 22, 1951.

The Thin Paper Group is composed of paper manufacturers who make carbonizing and condenser tissue, cigarette paper and other high-grade thin papers.

The speakers at the Thin Paper Group Meeting were W. L. Neubrech, Deputy Director of Pulp and Paper Division, National Production Authority; Col. Robert Hamilton, New York Purchasing Office of the Quartermaster General and M. C. Dobrow, Executive Secretary of the association.

PAPER NAPKIN ASSN.

Paper Napkin Assn. elected the following to its executive committee:

Chairman — B. T. Hoffmaster, president, Hoffmaster Paper Co.; vice-chairman for East — Norman Eber, president, Winchester Paper Co.; vice-chairman for West — Elmer R. Krueger, president, Paper Art Co.; Robert W. Bertram, Marathon Corp.; J. F. Meyer, Groff Paper Co.; R. L. Fenstamaker, C. A. Reed Co.; L. W. Moore, Crown-Zellerbach Co., San Francisco; John B. Kohl, Hobert Paper Mills. The association also relected Arlo Wilson as secretary-treasurer.

SULPHITE PAPER MFRS. ASSN.

The following were elected to head the association for 1951: Officers and Board of Governors—General Chairman, James G. Conley, general sales manager, Fraser Paper Ltd., 420 Lexington Ave., N. Y. 17; Vice-Chairman Bleached Group, Leo E. Croy, executive vice-president, Marathon Corp., Menasha, Wis.; Vice-Chairman Unbleached Group, George Stuhr, divisional sales manager, Southern Kraft Div. of International Paper Co., 220 East 42 St., New York 17; Vice-Chairman Manila Group, Donald F. McCall, vice-president, Racquette River Paper Co., 420 Lexington Ave., New York 17; Vice-Chairman Machine Glazed Group, Neil E. Nash, vice-president, Nekoosa Edwards Paper Co., Port Edwards, Wis.; Vice-Chairman Bleached Converting Group, Gilford F. Henderson, Mgr., Paper Sales Div., Brown Co., 500 Fifth Ave., New York 18; Wayne A. Brown, manager Eastern Div., Crown Zellerbach Corp., 122 E. 42 St., New York 17; Allan G. Hendry, Consolidated Water Power & Paper Co., 135 S. LaSalle St., Chicago; B. W. McEachern, vice-president and manager of sales, The Northwest Paper Co., Cloquet, Minn.; A. P. Mitchell, vice president, secretary and general sales manager, Riegel Paper Corp., 342 Madison Ave., New York 17; Alfred Southon, executive vice president, Kalamazoo Vegetable Parchment Co., Kalamazoo 99, Mich.; Secretary-Treasurer, Thomas J. Burke.

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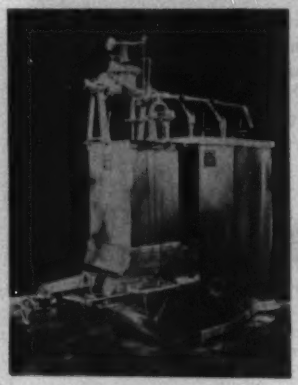

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SAPI ELECTS WATSON

George Watson, Mead Sales Co., formerly Eastern vice-president of the Salesmen's Assn. of the Paper Industry was elevated to the presidency at the annual meeting.

In his new post, Mr. Watson succeeds Daniel H. Keck, Kimberly-Clark Corp., who presided at the annual meeting. L. Worthington Dodd, Champion Paper & Fibre Co., was elected Eastern vice-president and M. A. Vanderheiden, Nekoosa-Edwards Paper Co., assistant Eastern vice president. William J. Tilden, Mead Sales Co., was re-named Western vice-president and H. M. Early, International Paper Co., was elected assistant Western vice-president. The growth of SAPI was indicated when David Cheever, Jr., Hollingsworth & Whitney Co., Boston, was elected vice-president representing the Boston division.

GEORGE WATSON
President

DAVID CHEEVER, JR.
Vice-Pres., Boston Div.

A surprise feature of the meeting was the presentation of a gold honorary life membership card—the first the association has issued—to George K. Gibson, Mosinee Paper Mills, Mosinee, Wis. He is now retired, living in Florida. Mr. Gibson was a founder of the Salesmen's organization in April 1920 and served as first president.

reduce chemical losses in with

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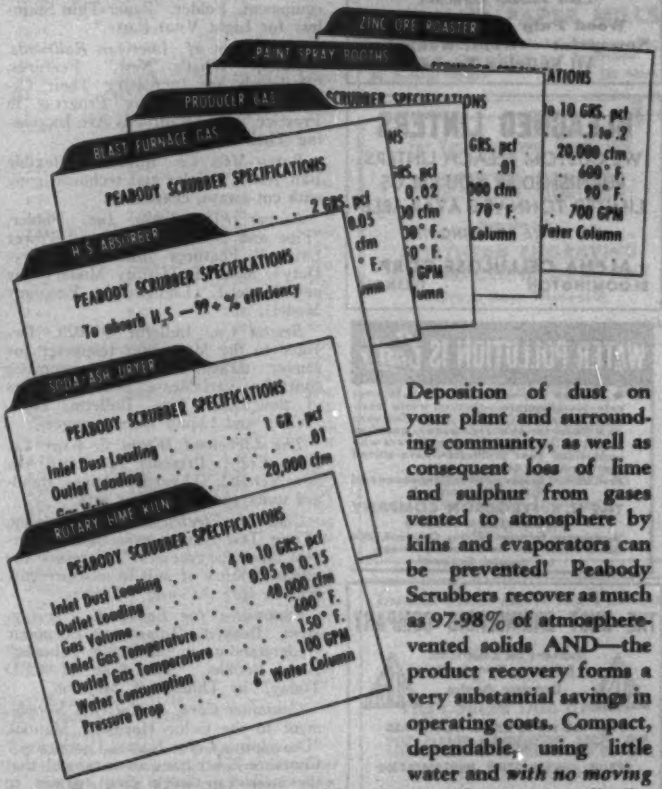

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NEW LITERATURE

Jensen Specialties, Inc., Advance Heating Div. Sales copy, "Electric Process Heating." Introduces and details rod-type heaters mounted on insulated oven wall sections.

Allis-Chalmers Mfg. Co. Leaflet, "No. 160 Series-Corrosion Inhibitor," 25X7582. Describes the manner in which corrosion inhibitor acts by neutralization and by surface adsorption to control the corrosion of steam and condensate lines.

Armco Steel Corp. Illustrated booklet, "A Stainless Profit Story for the Paper Industry." Flow sheets and a section on suitable grades show where and what stainless steels can be used to advantage in mill and finishing equipment. Folder, "Paper-Thin Stainless for Light Vital Parts."

Association of American Railroads. Booklet, "What's New." Features, "Railroads are Increasing Their Capacity," also "Railway Progress in Practice," and "Railroads Are Increasing Their Capacity."

Barco Mfg. Co. Bulletin, "Flexible Ball Joints." Sales and technical copy with cut-aways, charts, etc.

Beaver Pipe Tools, Inc. Folder, "Pipe and Bolt Machines and Power Drives." Features Model-A (Heavy-Duty), Model-B (Utility Model), the new Model-E (Lightweight, Economy Model).

Bristol Co. Bulletin DM029. Devoted to the Metameter telemeter for remote measurement and automatic control of variables of pressures, rates of flow, etc. Also, Bulletin, L700, "Water and Liquid Level Gauges."

The Cleveland Worm & Gear Co. Sales Copy. Presents Speedaire, the new ND and NU vertical drives, standard units and worm-gear sets.

Columbia Electric Mfg. Co. Catalog, "Tong Test Ammeters — Instant Current Measurements." Stresses the unique feature of unit to measure current in both AC and DC lines.

Committee for Economic Development. Booklet, "Improving Economic Understanding in the Public Schools." Also, Booklet, "The Role of CED Today," by Thomas B. McCabe.

Container Corp. of America. Supplement to the Color Harmony Manual, "Descriptive Color Names Dictionary." Contains 775 names so arranged that the user can work from names to colors or, conversely, from colors to names. Enables merchandisers to describe the colors of products in terms that the general public will quickly understand.

Golden-Anderson Valve Specialty Co. Bulletin No. W-3, "G-A Cushioned Water Pressure Reducing Valve." Technical data with dimensional tables, approximate shipping weights and general list of materials.

Ex-Cell-O Corp. Newspaper, "Pure-Pak News," January 1951. Features article "Electro-pure and Pure-Pak Combination Increases Sales Six-Fold in Three Years."

Food and Agriculture Organization of the United Nations. Booklet, "Bibliography of Forestry and Forest Products — December 1950."

VEGETABLE PARCHMENT MFRS. ASSN.

E. R. Leonhard, vice-president in charge of sales, Paterson Parchment Paper Co., Bristol, Pa. was elected Chairman of the Vegetable Parchment Manufacturers Assn. at their annual meeting. M. E. Moyer, president, West Carrollton Parchment Co., West Carrollton, Ohio was named Vice-Chairman and Thomas J. Burke, Secretary-Treasurer.

ASSN. OF PULP CONSUMERS

The Association of Pulp Consumers named the following as directors of their organization to serve until February, 1954: R. T. Anderson, vice-president, Paterson Parchment Paper Co., Bristol, Pa.; David C. Knowlton, president, Knowlton Bros., Watertown, N. Y.; A. K. Nicholson, president, Hollingsworth & Vose Co., East Walpole, Mass.; Walter B. Sheehan, president, Missiquoi Corp., New York, N. Y.; W. B. Zimmerman, executive vice-president, Howard Paper Co., Franklin, Ohio. They will join the following whose terms have not yet expired: W. F. Erisman, Erving Paper Mills, Erving, Mass.; Robert H. Evans, Olin Industries, Inc., New York, N. Y.; R. Graham Hagey, Ohio Boxboard Co., Rittman, Ohio; P. Koenig, P. H. Glatfelter Co., Spring Grove, Pa.; T. F. Murphy, Beach & Arthur Paper Co., New York, N. Y.; D. E. Oberweiser, Fox River Paper Corp., Appleton, Wis.; William Race, Sutherland Paper Co., Kalamazoo, Mich.; Dwight L. Stocker, Michigan Paper Co. of Plainwell, Plainwell, Mich.; Gilbert A. Weisberger, Orange Pulp & Paper Mills, Inc., Long Island City, N. Y.; Geo. E. Williamson, Strathmore Paper Co., West Springfield, Mass.

Robert H. Evans has been named President, Aubrey Nicholson, Vice-President and Karl A. Clauson continues as Secretary.

SOUTHON HEADS KVP

Alfred Southon, formerly executive vice-president, was elected to the office of president by the board of directors of the Kalamazoo Vegetable Parchment Co. at their regular meeting following the annual meeting on Friday, February 16. He succeeds the late Ralph A. Hayward, who died on January 11. Mr. Southon had been named general manager at the previous board meeting.

Financial News

STOCK REPORT

	Per Share Earnings		Indic Annual Divid. Rate	Feb. 20 Approx. Market Price
	Calendar Year 1949	12 Mo. to Approx. 9/30/50		
PREFERRED STOCKS				
Armstrong Cork Co. $3.75 Cum.	$40.95*	$48.14a	$3.75	$102⅜
Armstrong Cork Co. $4.00 Cum Conv.	40.95*	48.14a	4.00	116¾
Celotex Corp. 5% Cum.	6.00c	11.70e	1.00	16⅜
Champion Paper & Fibre $4.50 Cum.	60.09f	103.62h	4.50	107½
Container Corp. of Amer. 4% Cum.	89.32	122.92	4.00	104¼
Crown Zellerbach $4.20 Cum.	$4.30c	66.87	4.20	104¾
Dixie Cup Co. $2.50 Cum. Conv. Cl. A	10.93	13.79	2.50	56⅜
Flintkote Co. $4 Cum.	62.70	90.41h	4.00	106⅜
Robert Gair Co., Inc. 6% Cum.	13.79†	17.31†	1.20	19¾
International Paper Co. $4 Cum.	224.55	323.40	4.00	108⅛
Kimberly Clark Corp. 4% Cum.	85.27	114.95i	4.50	108¾
MacAndrews & Forbes 6% Cum.	61.59	61.83	6.00	139
Mead Corp. 4¼% Cum.	51.37	58.30	4.25	96
Mead Corp. 2% Cum. Conv. 2nd	21.35*	36.20*	2.00	66
Pabco Products, Inc. 4% Cum. Conv.	56.46	120.13h	4.00	101¼
Rayonier Inc. $2 Cum.	9.54	17.25h	2.00	37⅛
St. Regis Paper Co. 4.40% 1st A	30.74	65.23h	4.40	95½
Scott Paper Co. $3.40 Cum.	51.15*	62.16*	3.40	101½
Scott Paper Co. $4.00 Cum.	51.15*	62.16*	4.00	107¼
Sutherland Paper 4½% Conv.	46.92	81.31h	4.25	120½
U. S. Gypsum Co. 7% Cum.	383.37	429.37	7.00	183¼
United Wallpaper Inc. 4% Cum. Conv.	2.14	0.84h	2.00	26⅝
West Virginia Pulp & Paper 4½% Cum.	61.28c	92.91e	4.50	110¼
COMMON STOCKS				
APW Products Co.	(d)0.81	8.43	—	7⅛
American Writing Paper Corp.	.04	0.86	0.30	8¼
Armstrong Cork Co.	6.57	7.84a	3.75	52⅜
Celotex Corp.	1.65c	3.01e	1.00	17⅛
Certain-Teed Prods. Corp.	2.84	3.43	1.50	16⅜
Champion Paper & Fibre	5.15f	9.44h	2.45	56½
Congoleum Nairn Co.	3.04	2.70a	2.00	26⅜
Container Corp. of America	4.23	5.14	2.50	39½
Crown-Zellerbach	6.02c	7.36	2.20	53⅛
Dixie Cup Co.	7.44	9.87	1.50	53¼
Eastern Corp.	0.04	3.04	1.00	20⅞
Flintkote Co.	4.33	5.82h	3.00	29¾
Robert Gair Co., Inc.	2.11†	2.49†	0.70	12⅞
Great Northern Paper Co.	4.87	3.73	3.00	52¼
International Paper Co.	7.12	8.65	3.50	52⅜
Johns-Manville Corp.	4.83	7.22h	3.50	52⅜
Kimberly Clark Corp.	5.29	6.28i	1.80	45¼
MacAndrews & Forbes Co.	3.64	3.74	3.00	40¼
Marathon Corp.	3.39c	4.84e	1.40	42¼
Mead Corp.	4.10	7.22	2.20	26¼
National Container Corp.	0.95	2.00	0.75	12⅜
Pabco Products, Inc.	0.85	1.87h	0.60	18⅜
Rayonier, Inc.	4.75	9.61h	2.50	50⅛
Ruberoid Co.	7.93	8.65	3.18	53⅜
St. Regis Paper Co.	0.91	3.10h	0.60	13
Scott Paper Co.	6.07	7.12	3.00	45⅞
Sutherland Paper Co.	4.62	7.46h	2.75	48¼
Union Bag & Paper Corp.	5.01	6.68	3.00	42¼
United Board & Carton	(d)1.61b	1.56g	0.50	19¼
U. S. Gypsum Co.	13.51	17.87	10.00	116¼
United Wallpaper	(d)0.01	(d)0.01h	—	4
West Virginia Pulp & Paper	8.58c	12.93e	5.00	82⅜

(a) 12 months to approximately 6/30/50
(b) Year ended 11/13/49
(c) Year ended 1/31/50
(d) Deficit
(e) 12 months to 10/31/50
(f) 9 months to 12/31/49
(g) 12 months to 11/11/50
(h) 12 months to 12/31/50
(i) 12 months to 1/31/51
(*) Earnings per combined preferred shares
(†) Excludes domestic and Canadian subsidiaries and 60% equity in Southern Paperboard Corp.

JOHN MALONEY ELECTED

John Maloney was elected vice-president-sales of Hoberg Paper Mills at the annual meeting of the board of directors held February 14 in Green Bay. Mr. Maloney has been a member of the company sales staff since 1924 and has served as sales manager for the past eight years.

MACON BUYS TIMBER TRACT

Macon Kraft Co. has bought a tract of approximately 19,700 acres of land in Bartow and Cherokee counties from the Georgia Power Co. for $350,000.

QUEBEC POWER DEVELOPMENT

OTTAWA.—Gulf Pulp and Paper Co. is planning a 37,000 h.p. development on Ste. Marguerite River in Quebec to serve Seven Islands and Clarke City.

HYDROGEN PEROXIDE PROCESS

WILMINGTON, Del. — The development of an improved process for the commercial production of hydrogen peroxide, an increasingly important industrial chemical, was disclosed February 19 by E. I. du Pont de Nemours & Co.

At the same time, the firm announced it would build its first production unit at Memphis, Tenn., at the same site where Du Pont is just starting to build a unit for the production of sodium cyanide.

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AMERICAN PAPER AND PULP ASSOCIATION'S PAPER PRODUCTION RATIO REPORT

(Production as per cent of normal capacity)

COMPARATIVE WEEKLY SUMMARIES

	Jan. 13	Jan. 20	Jan. 27	Feb. 3	Feb. 10
1951	100.4	101.8	101.2	100.3r	98.4
	Jan. 14	**Jan. 21**	**Jan. 28**	**Feb. 4**	**Feb. 11**
1950	93.9	94.3	94.0	95.4	96.3

COMPARATIVE MONTHLY SUMMARIES

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1950	92.6	95.6	96.7	95.4	96.4	97.7	85.3‡	99.6‡	96.2‡	101.2‡	100.3‡	93.7‡	95.6‡
1951	99.5‡												

‡ Preliminary.
r Revised.

COMPARATIVE YEARLY SUMMARIES

	1944	1945	1946	1947	1948	1949	1950	1951
Year to Date	88.7	86.8	93.2	104.2	100.5	94.7	99.6	99.6
Year Average	88.1	89.4	108.1	104.3	96.2	88.6	92.9‡	

PAPERBOARD OPERATING RATIOS†

	Jan. 13	Jan. 20	Jan. 27	Feb. 3	Feb. 10
1951	106	104	104	103	104
	Jan. 14	**Jan. 21**	**Jan. 28**	**Feb. 4**	**Feb. 11**
1950	94	92	92	91	93

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Year Avg.
1950	88	92	91	92	91	94	82	100	96	102	101	95	94
1951	102												

All of the above data is based on tonnage reported to American Paper and Pulp Association. Does not include mills reporting to National Paperboard Association, except in isolated cases where both paper and paperboard are produced and separate tonnage figures are not readily available. Does not include mills producing newsprint exclusively.

Note: The chart shown the ratio through December 1950 on the basis of 6-day capacity. Beginning with January 1951 the ratio is shown on the new basis of normal 6- and 7-day capacities. Corresponding weekly and monthly ratios for 1950 on the new basis, shown in the tables above, are somewhat lower.

Paperboard operating ratios continue on the basis of a 6-day week.

† Per cents of operation based on "inch-hours" reported to the National Paperboard Association.

SCOTT BUYS FALLS PAPER

Scott Paper Co., Chester, Pa., has acquired all of the outstanding stock of Falls Paper and Power Co., of Oconto Falls, Wis. Scott issued 30,000 of its common shares in exchange for the stock acquired.

Falls Paper and Power Co. has a bleached sulphite pulp capacity of approximately 80 tons per day and facilities for producing approximately 30 tons of groundwood pulp daily. There are also two small paper machines which can be adapted to the production of certain Scott products.

The acquisition represents a further integration of raw materials into the operations of Scott Paper Co.

BLEACHED COTTON MILL

The Alpha Cellulose Corp. has completed the construction of a cotton bleaching plant located at Bloomington, Ill. It is equipped with the most modern processing equipment, including Globe digesters, refiners, washers and bleaching facilities. Stock chests are of tile construction and piping of transite in order to maintain maximum cleanliness of product.

The equipment and installation are so designed as to give the utmost flexibility and various grades of cotton can be processed to the customers' requirements — whether it be pulp for the paper manufacturer or bleached cotton for other uses.

The Plastics and Resins Division of American Cyanamid Co. have assigned N. C. Martin to act as a consultant to firms requiring technical assistance in the production of weather-proof bag seams and weather-proof solid and corrugated fiber board.

CENTRAL STATES ADDS PLANT

Central States Paper & Bag Co. has announced the addition of a fourth plant to serve western states. The firm manufactures paper and plastic bags and liners.

The new plant is located at 1755a Utah street, Seattle, Wash. The firm's headquarters and main factory are at 5221 Natural Bridge, St. Louis, Mo. Other plants are located in Irvington, N. Y., and Salt Lake City, Utah.

SULPHITE LIQUOR EVAPORATION

APPLETON, Wis.—Research on evaporation of spent sulphite liquor will be expanded in the next few months, the Sulphite Pulp Manufacturers' Research League announced. An experimental evaporator has been ordered from a Pennsylvania manufacturer for delivery early this summer. The unit is of a type that has been successfully used in many chemical industries, but has never been extensively tested on sulphite liquor.

As one of the most promising ways to reduce stream pollution, Wisconsin sulphite mills have been trying to evaporate liquor and burn the residue as industrial fuel. Three companies' offers to test this method on full-scale operation are now in the hands of the State Committee on Water Pollution.

The only evaporator in Wisconsin capable of concentrating spent sulphite liquor so that it can be burned is in the League's pilot plant at Appleton. It was obtained 18 months ago. This unit has been operating to capacity ever since it was installed, concentrating spent liquor from various mills, to be used by these mills for burning tests. Quantity of concentrated liquor available for testing has set the pace for the combustion experiments.

"As water is removed during evaporation, lime salts in the liquor tend to crystallize in deposits on the hot surfaces of the evaporator," explained Averill J. Wiley, technical director of the League and widely recognized authority on sulphite pollution. "The resultant scale interferes with operation of the equipment. To avoid this trouble, we have been successfully using a Swedish-made evaporator which reverses the flow of liquor every few hours and thus washes the freshly deposited salts off the surface before it has time to harden.

"Our newly ordered evaporator operates on an entirely different principle that is expected to prevent formation of the crystals on the surfaces, rather than provide a way for removing them after formation," Mr. Wiley pointed out. "This permits a simpler design because no reverse flow is needed."

Like the Swedish unit already in use, the new unit is designed of stainless steel. The manufacturers claim low operating costs. This could be an important advantage, since the evantual adoption of any given method for reducing stream pollution must depend upon whether it can be used at a cost that is economically supportable.

OBITUARIES

William Stuart Forbes, 80, chairman of the board and treasurer of the Forbes Lithograph Co., Boston, died February 2 at his home in Hamilton, Mass.

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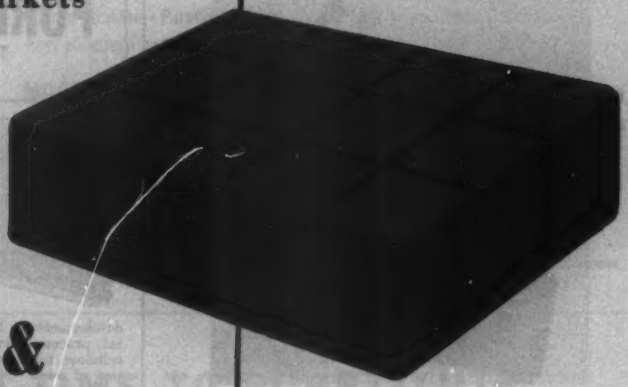

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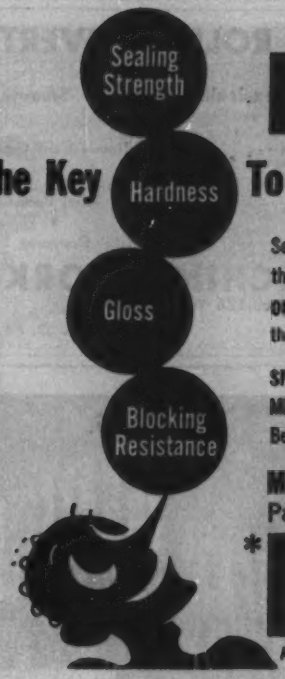

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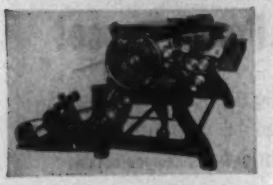

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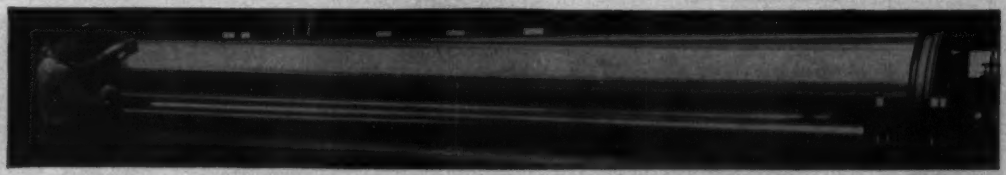

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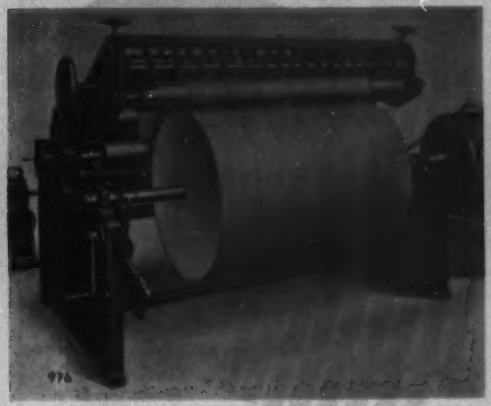

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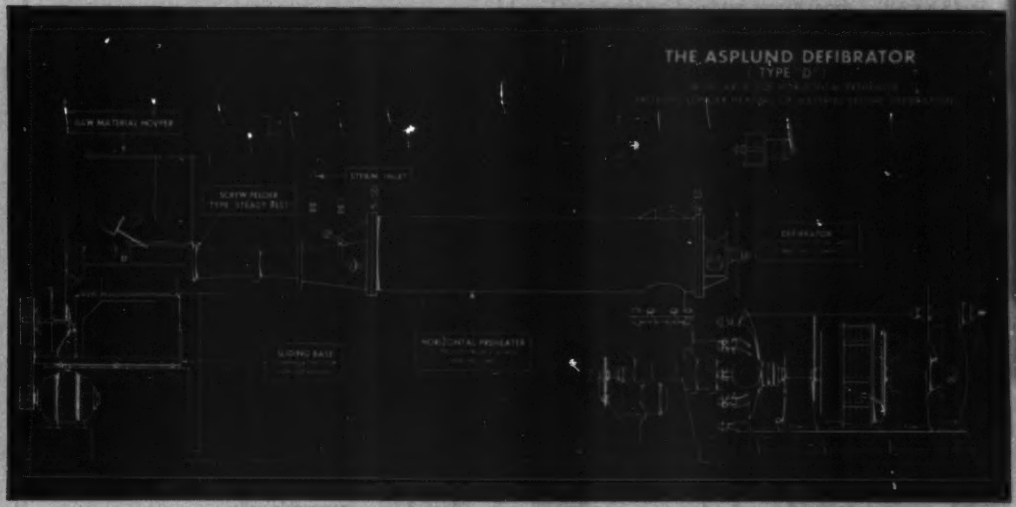

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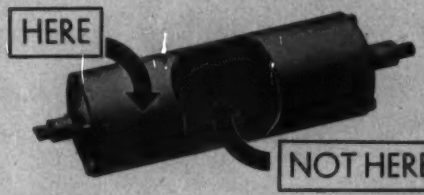

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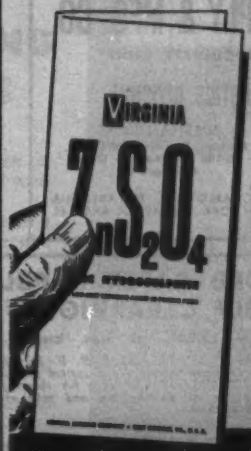

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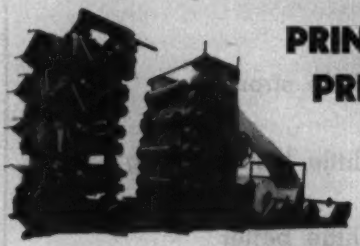

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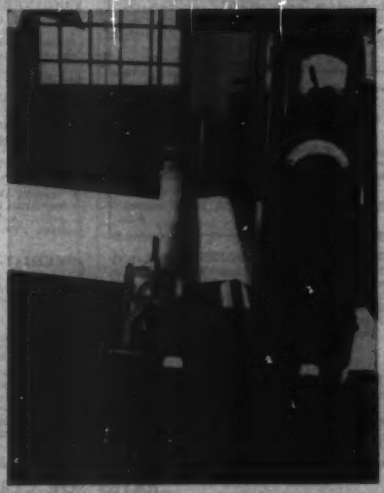

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BEATERS
1—1½ lb. Laboratory Beater.
1—Dilo Iron Tub Laboratory Beater. Beater roll 14" diameter x 10¼" face, including motor.

CALENDER STACKS
1—72" 3 roll Calender Stack.
1—3 roll pressure calender—32" x 108".
1—72" 4 roll calender stack. (Extra heavy duty).
1—90"—3 roll.

CHIPPER
1—36" Murray 4 knife Chipper—anti-friction bearings.

CRUSHER & HAMMERMILL
1—Murray Chip Crusher.
1—Jeffrey Hammermill.

CYLINDER MOLDS
1—28" diameter x 72" face.
1—58" diameter x 79" face.
1—36" diameter x 54" face.
1—38" diameter x 90" face.
1—48" diameter x 72" face.

DRIVES
1—#5½ Reeves Drive.
1—#4 Reeves Drive
1—Reliance Electric Drive, complete with 5 gear head motors.
2—#3 Reeves Drives (totally enclosed).

V-BELT DRIVE
1—21½" diameter x 7½" face, 5 groove.
1—16½" diameter x 7½" face, 5 groove.
(With clutch).

DRYERS
1—Complete unit, consisting of 6 dryers, 36" diameter x 36" face, including frames, gears, anti-friction bearings.
7—24" diameter x 48" face.
1—48" diameter x 91" face.
2—60" diameter x 0454" face.
1—36" diameter x 142" face.
1—24" diameter x 120" face.
1—48" diameter x 79" face.
1—48" diameter x 83" face.
3—Dryers 48" diameter x 130" face.
1—30" diameter x 84" face.
1—24" diameter x 84" face.
2—20" diameter x 48" face.

FELT CONDITIONER
1—140" Nash Felt Conditioner.

FLAT SCREENS
1—6 stone Shartle Flat Screen
7—Packer, 12 plate, roller shoe type.

FRAMES
Vertical frames for 100 dryers, 48" diameter, with bearings.

JORDANS
1—Horne Jordan.
2—Noble & Wood Mammoth.

LIME SLUDGE FILTERS
2—IMPCO Lime Sludge Filters, vacuum type, 5' diameter x 4' face.
2—IMPCO Lime Sludge Filters, vacuum type, 5' diameter x 10' face.

MISCELLANEOUS
1—Caustic Mixer.

MOTORS
1—125 h.p., 1700 r.p.m.
1—30 h.p., 850 r.p.m.
Write us regarding your requirements.

PRESSES
2—Sets Primary Presses, complete, 149" face. Anti-friction bearings. Also all types of rolls for 148" wet end.

PULLEYS
Various cone and grooved pulleys.

PULPERS
1—Jones Pulper. Complete with motor and drive.
1—Noble & Wood Pulper—Iron Tub.

PUMPS
Various sizes of Centrifugal and Plunger Pumps. Write us regarding your particular requirements.
4—Shartle Brothers circulating pumps, each 4,000 g.p.m.

REEL
1—104" Beloit two bevel reel.

REFINERS
3—Claflin Refiners.

ROLLS
Felt, Table, Press, Breast, Couch, etc. Various sizes and types. (Bronze, Rubber, Iron, etc.)

ROTARY SCREENS
1—#2 Bird Rotary Screen.
1—#2A Bird Rotary Screen.
5—#2A Cylinders, only (for Bird Rotary Screens). (Chrome plated).

SAVEALLS
1—#3 Bird Saveall.
2—Savealls, 36" diameter x 116" face cylinder molds, iron end vats.

SHEETERS
2—96" Sheeters.
2—66" Sheeters.
2—56" Sheeters.
1—44" Hamblet Sheeter, rebuilt.
2—84" Hamblet.

SHREDDERS
2—Daniels Rag Cutters.
1—Taylor-Stiles Giant Shredder, portable.

SLITTERS & WINDERS
1—48" Cameron—Type 40-A-B.
2—42" Cameron—Type 24-3-A.
1—36" Cameron—Type 0-A.
1—112" 2 drum Waldron.
2—112" Cameron—Type 18.
1—104" Beloit two drum winder.
1—42" Cameron Constant Tension with pneumatic control.
1—42" Cameron—Type 6.
1—42" Cameron—Type 8-A.
1—42" Cameron—Type 36-1A.
1—84" Cameron—Type 8-10.

STOCK PUMPS
1—10 x 20 Shartle Duplex.
1—7 x 16 Shartle Duplex.
1—7 x 16 Shartle Triplex.
1—10 x 16 Shartle Triplex.
Advise us as to your requirements.

SUCTION BOXES
2—Section Boxes, 42" drilled face x 8" wide.

SUCTION COUCH ROLL
1—Sandusky 14¾" dia. x 102" drilled face.

VACUUM PUMPS
1—#9 Nash Hytor.
1—#1 Nash Hytor.

VAT
1—Iron end Vat only, for docker or saveall, suitable for cylinder mold 36 x 120.

WAXING MACHINES
1—60" Pusdevin Waxing Machine.

YANKEE DRYERS
1—48" Face x 96" Diameter, Frames & Bearings.
1—83" Face x 60" Diameter, complete with frames, gears, bearings, felt rolls and Baby Dryers.

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67 feet 5" 15 ply Goodyear Rubber Belting.
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40 Chilled Iron Rolls—Assorted sizes.

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1—18½ ft. long x 20" wide—with motor.

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1—Cameron with 2" x 1¼" mandrels.

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1—118" face x 20" diameter. New.

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1—134" face x 90" diameter, with stainless steel shafts.

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4—Falk right angle 75 hp—ratio 6.31-1.
1—Falk right angle 150 hp—ratio 7-14-1.
1—Falk straight 200 hp—ratio 1-57-1.
1—Falk straight 150 hp—ratio 3-12-1.
Above complete with clutch pulleys.

DRYERS
3—124" face x 48" diameter.
1—98" face x 36" diameter.
1—72" face x 60" diameter—with gear.
1—120" face x 60" diameter—Duby Dryer.
53—126" face x 42" diameter.
1—96" face x 30" diameter.
1—132" face x 48" diameter, with bearings.
1—100" face x 48" diameter—with gears and bearings.
3—110" face x 48" diameter with bearings and gears.
1—112" face x 48" diameter.
1—54" face x 30" diameter.

FILTER PRESS
1—New Sperry filter press, size 12, type 41.

FILTERS
1—Oliver Vacuum Filters, Cylinder 10' face x 9'6" diameter. Steel vats. 1200 GPM capacity.

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3—8 plate Sandy Hill Roller Shoe with scrapers.
6—Harmon 12 plate.
4—Sandy Hill 12 plate roller shoe.

FOURDRINIER SECTIONS
1—P & J 150" x 60 ft. ball bearing. Complete from inlet to 12" diameter suction couch. Bronze and Rubber covered table rolls. 6 Bronze Suction Boxes operated at 1000' per minute.

JORDANS
1—60 Miami, for motor drive.
1—Jones Majestic, with base and couplings—
1—60 Appleton with base and coupling.
1—Jones Majestic, Stainless Steel Fitting.

LAMINATOR
1—Downingtown 52" Laminator, with 4 Dryers 40" diameter.

MOTORS
1—General Electric 150 h.p. vertical motor—1200 r.p.m., 440 v., 3 phase, 60 cycle.
1—G. E. 75 h.p. vertical motor, 1200 r.p.m., 440 v., 3 phase, 60 cycle.

PULP EQUIPMENT
1—Mitts & Merrill #17 Pulpwood chipper.
1—Bird ball bearing Pulp Screen. Practically new. Used 8 months.
4—APMEW Ball Bearing Pulp Screens—30 ton capacity.

PULPERS
2—#2 Lamoyo with enclosed Falk Drives. New.

PUMPS
44—Centrifugal Pumps, cast & stained iron/iron. Direct connected or Belt Drives. Extended base for motor. Assorted capacities and heads. Most used less than one year. Also new Gaulds Pumps.

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1—Link Belt 40 h.p. Ratio 2.2-1, 880 r.p.m.-527 r.p.m.

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1—Sprout, Waldron, with 400 HP, 440 volt, 3 phase, 60 cycle motor and starter—Practically new.

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22—Press rolls, brass and rubber covered.
14—Couch rolls, brass and rubber covered.
250—Brass and steel carrying rolls.

ROTARY SCREENS
4—#2A Bird, fully rebuilt with new vats, plates, etc.—enclosed drive.
1—#2 Bird—stainless steel vat.
1—#1 Bird—iron vat.

SAVEALLS
3—Oliver, Vacuum type cylinder 120" face x 60" diameter, with steel vats.

SCREW PRESSES
1—Valley Vaith Screw Press Size 2A, with new spare sets of plates.

SHEETERS
1—42" Kidder Spot Sheeter.

SHREDDERS
1—American 27" Hammermill, anti-friction bearings.
1—Sprout Waldron Cutter—type F-11—38" knives. Used 30 days.

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1—Perry & Jones 100" high speed slitters and rewinders.
1—Cameron 92" Model G.
1—Kidder 120" Paper Machine Slitter and Winder—52" rewind.
1—Moore & White 120" Four Drum Paper Machine Slitter and Winder—52" rewind.
1—Beloit 120" Paper Machine Slitter and Rewinder—42" rewind.

STUFF PUMPS
1—Shartle 10 x 20 Triplex.

SUCTION COUCH ROLLS
1—Hillesough 22" diameter x 130¾" cerelloe face.
1—Hillesough 22" diameter x 126" drilled face.
1—Beloit 24" face x 10" diameter—Ball bearing.

SUCTION PRESS ROLLS
1—Hillesough 131" drilled face x 22" diameter with stand & drive.

THICKENERS
1—Bird Thickener Iron End Vats—Cylinder 72" face x 42" diameter, with Shower and Felt take off roll.
1—Wandle Thickener Cylinder 80" x 30" with showers and doctor. Gear head motor drive. Used 2 months.

WATER FINISH UNIT
1—Valley Micronist Unit for water finish on paper—120" deckle.

WAXING MACHINE
1—Waldron 40" Waxer and Impregnator.

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Advise full particulars including blue print if possible and best cash price.

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84" Trim Machine, including:
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Extra spare Felt Rolls, Extra Primary Press Rolls, Extra Secondary Press Rolls.

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In the mellow days of yore,
It showed a man's importance
Like the diamond he wore.

But fashions haven't altered
Within the paper mill —
They clothed the press with Draper Felts
The make they're using still.

The moral of this little tale
Is evident, dear reader,
The Draper Felt before and since
Has always been a leader.

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Woolen Manufacturers Since 1856
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Manchester Machine Co.

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National Tube Co.

DAMPENERS
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Valley Iron Works Co.

DOCTOR BLADES
Williams-Gray Co.

DEFIBRATORS
American Defibrator Co.

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General Dyestuff Corp.
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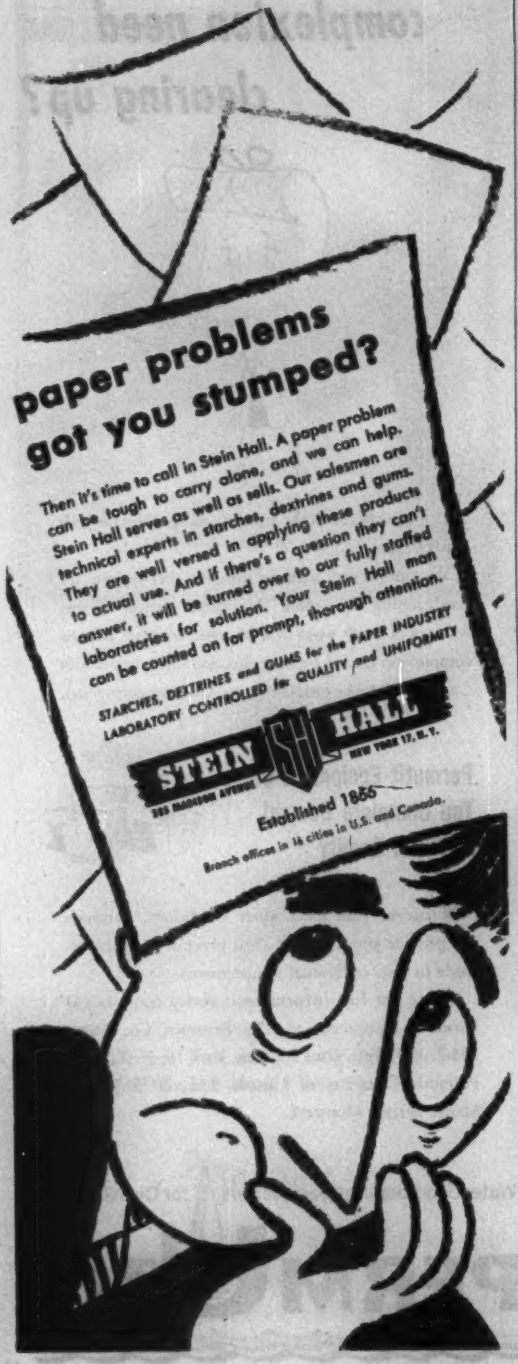
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General Dyestuff Corp.
Monsanto Chemical Company
Nopco Chemical Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp., Michigan Alkali Div.

DEWAXING CHEMICALS
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General Dyestuff Corp.
Nopco Chemical Co.

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Chicago Bridge & Iron Co.
Combustion Engineering-Superheater, Inc.
Lukenweld
Pusey & Jones Corp.

DIGESTERS (Continuous)
Paper & Industrial Appliances

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Monsanto Chemical Company
National Aluminate Corp.
Nopco Chemical Co.
Rohm & Haas Co.
Wyandotte Chemicals Corp., Michigan Alkali Div.

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Lobdell United Co.
Lodding Engineering Corp.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

DOCTOR BLADES
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Lodding Engrg. Corp.
The Moore & White Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.

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Downingtown Mfg. Co.
Gibbs-Brower Company, Inc.
Lukenweld
The Moore & White Co.
Murray Mfg. Co., D. J.
J. J. Ross Company
Rod-Ray Mfg. Co., Inc.
Ross Paper Machy. Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Valley Iron Works Co.

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Manchester Machine Co.

DRILLED SUCTION DRUM ROLLS
Manchester Machine Co.

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Downingtown Mfg. Co.
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Farrel-Birmingham Co.
General Electric Company
Gibbs-Brower Company, Inc.
Rodney Hunt Machine Co.
Link Belt Company
Moore & White Co.
Murray, D. J., Mfg. Co.
Pusey & Jones Corp.
J. J. Ross Company
Ross Paper Machy. Corp.
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Shartle Bros. Mch. Co.
Stephens-Adamson Mfg. Co.
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Stickle Steam Specialties Co.

DRYER ROLL PYROMETER
Thwing-Albert Instrument Co.

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E. D. Jones & Son Co.
Moore & White Co.
D. J. Murray Mfg. Co.
John Waldron Corp.

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M. W. Jenkins Sons, Inc.

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Ciba Company
E. I. du Pont de Nemours & Co., Inc.
Geigy Co., The
General Dyestuffs Corp.
National Aniline Division, Allied Chemical & Dye Corp.

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Shartle Brothers Machine Co.
Waldron Corp., John

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Vanderbilt Co., R. T.
Wyandotte Chemicals Corp., Michigan Alkali Div.

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Dingerfeld & Terry, Inc.
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Moore & White Co.
J. O. Ross Engrg. Corp.
The Sandy Hill Iron & Brass Works
Walworth Company

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Shartle Bros. Mch. Co.
Walworth Company

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John Waldron Corp.

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Norton Co.

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Towmotor Corp.

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Williams Apparatus Co., Inc.

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General Electric Co.
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Nopco Chemical Co.
Wyandotte Chemicals Corp., Michigan Alkali Div.

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W. & L. E. Gurley
Egan, Frank W., & Co.
E. D. Jones & Sons Co.
Taylor Instrument Companies
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Valley Iron Works Co.
John Waldron Corp.
Williams Apparatus Co., Inc.

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Egan, Frank W., & Co.
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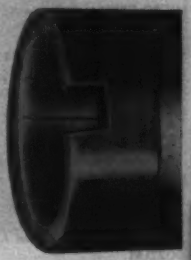

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Waldron Corp., John

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Crane Company
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Michigan Steel Casting Co.
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Alrtrix Division, Hayden Chemical Corp.
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Shartle Brothers Machine Co.
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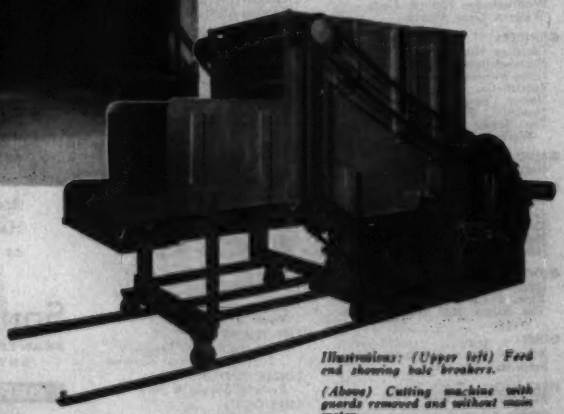

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- Shortens the time in the digesters.
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- Cuts up to 1000 pounds of straw per minute.

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Illustrations: (Upper left) Feed end showing bale breakers.

(Above) Cutting machine with guards removed and without main motor.

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DeLaval Steam Turbine Co.
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Hudson Sharp Machine Co.
Moore & White Co.
Rodney Hunt Machine Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
The Smith & Winchester Mfg. Co.

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Morden Machines Co.
Murray, D. J., Mfg. Co.
Sandy Hill Iron & Brass Works
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Sprout Waldron & Co., Inc.
Sutherland Refiner Corp.
Valley Iron Works

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D. J. Murray Mfg. Co.
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Ross Paper Machy. Co.
Rodney Hunt Machine Co.
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Pendevin Machine Co.
The Sandy Hill Iron & Brass Works
Shartle Brothers Machine Co.
Waldron Corp., John
Weber, Herman G.

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Appleton Machine Company
Bird Machine Company
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Dilts Machine Works, Inc.
Downingtown Mfg. Co.
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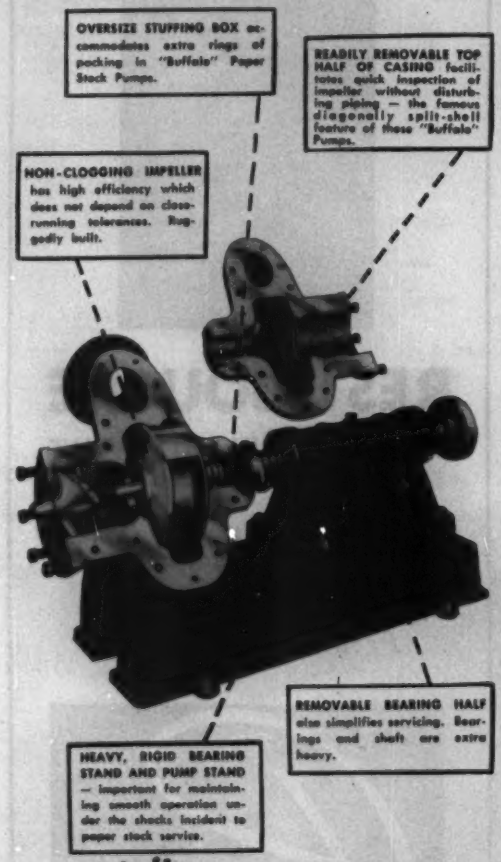
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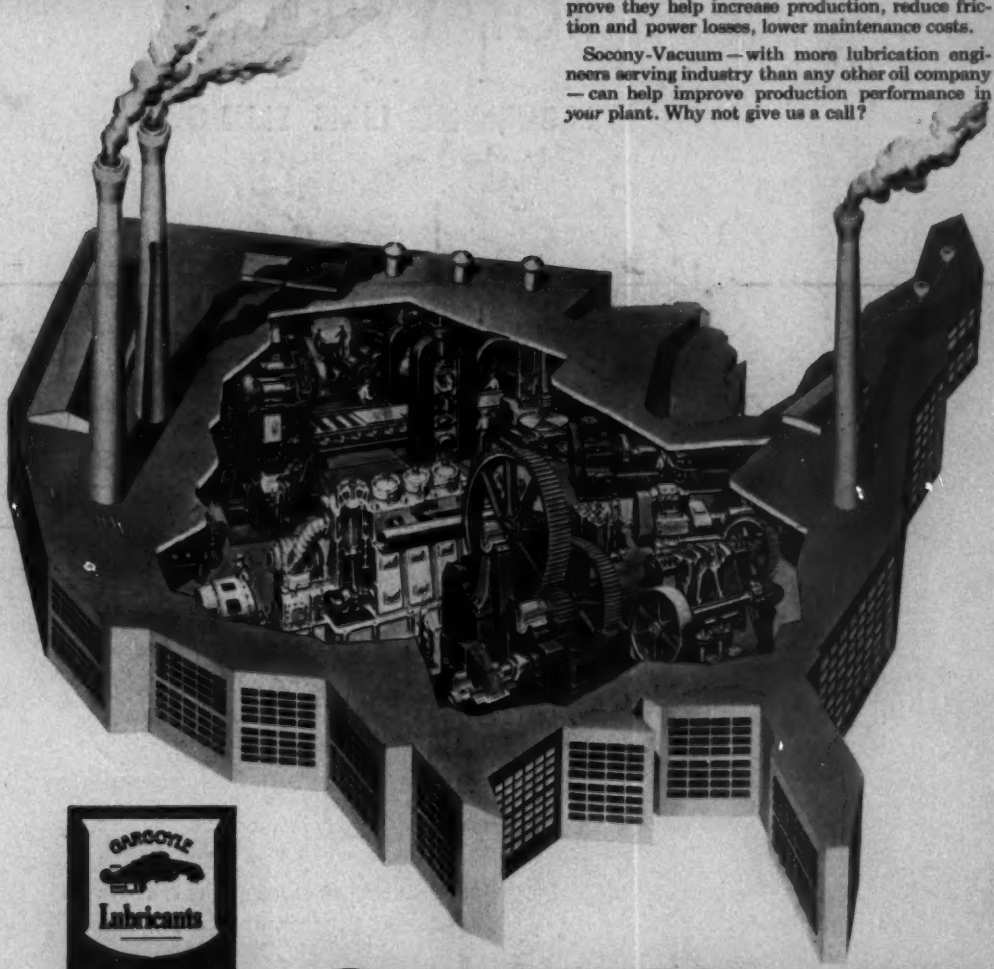

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